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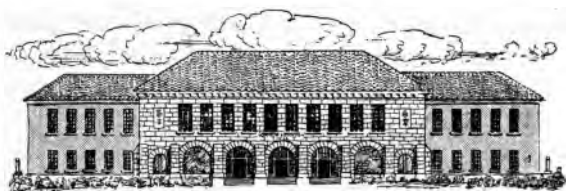
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PLANT SCHOOLS
HISTORY AND THEORY

DAVID SALMON
AND
WINIFRED HINDSMAW, S.A.

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INFANT SCHOOLS

THEIR HISTORY AND THEORY

BY

DAVID SALMON

PRINCIPAL OF SWANSEA TRAINING COLLEGE

AUTHOR OF "THE ART OF TEACHING," ETC., ETC.

AND

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LONGMANS, GREEN, AND CO.

39 PATERNOSTER ROW, LONDON

NEW YORK, AND BOMBAY

1904

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THE UNIVERSITY OF CHICAGO

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P R E F A C E

THOUGH the Infant School was established only recently,

Since after all Time's dial-plate
Marks cent'ries with the minute finger,

its importance as an institution is now universally admitted. The history of its evolution ought, therefore, to interest all teachers, and the theory underlying its methods ought to interest all teachers of the young.

For any one who undertakes the work of education, professional skill is essential, but this may happen to exist along with entire ignorance of both history and theory. Still, the art is most likely to be correct which is taught by history to avoid the mistakes of the past and by theory to conform to the laws of Nature.

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All the faults in Part I. are mine; all the merits in Part II. belong to my colleague, Miss Hindshaw.

In Part I. the chapters on Oberlin and Froebel are taken, with little alteration, from my *Art of Teaching*; the other chapters are expanded from articles in the *Teachers' Times*.

DAVID SALMON.

SWANSEA,

14th July, 1904.

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PART I.
HISTORY.

J. F. OBERLIN.

THE continuity of the human race would have been impossible if father and mother had not taught son and daughter how to provide the necessities of existence. Education in the sense of preparation for life must therefore be as old as mankind. Such education was individual, but the advantage of collective instruction by specially qualified persons must have become apparent soon after the discovery of the art of writing, with its essential complement, the art of reading.

Schools being thus coeval with civilisation, it is remarkable that the idea of getting infants to attend them should be so very modern. The explanation is probably twofold:—

(1) The idea that the children of the poor need schools of any kind is itself very modern, and it is generally held that for other children the training of the home is, in early years, the best.

(2) Infants are incapable of receiving instruction of the kind usually given to older children. The discovery that education is not synonymous with such instruction is comparatively recent; consequently, schools for infants are also comparatively recent.

4 Infant Schools, their History and Theory

The first of which we have any account was established by Jean Frédéric Oberlin, who was for fifty-nine years (1767-1826) pastor of the Ban de la Roche (some thirty miles south-west of Strasburg). Like Chaucer's "Good Man of Religioun" he was poor in worldly wealth,

But riche he was of holy thought and werk.
He was also a lerned man, a clerk
That Cristes gospel trewely wolde preche;
His parisshe devoutly wolde he teche.
Benigne he was and wonder diligent
And in adversité ful pacient . . .
Wyd was his parisshe and houses fer asonder.

This parish consisted of several narrow gorges lying high in the Vosges and separated from Alsace by the vast plateau of the Champ-du-Feu. Its character is indicated by its German name, Steinthal (stone valley). The devastations of war had added to the misery induced by a rigorous climate and scanty soil; while the entire absence of roads cut the people off from the civilising influence of intercourse with the world. When Oberlin entered upon his duties there were no schools of any kind. In the days of his predecessor there had been what was called a school. A few of the Waldenbach boys and girls assembled daily in the hut of a bedridden old man who could neither read nor write, and who, rendered unfit by the infirmities of age for looking after the village pigs, had been degraded to looking after the village children.

Oberlin was wonderfully prolific in schemes for the

physical, intellectual, moral, and economic amelioration of his flock ; but his greatest hope and trust lay in the education of the young. With true insight he saw that if he could only devise plans for forming the young of one generation there would be no necessity for him to devise plans for reforming the adults of the next, and he therefore made the provision of means of education his first care. Although the manse was so ruinous that rats frolicked in his bedroom, and rain pattered on his bed, he would not hear of a new one till a school had been built in each village, and as the people were afraid of the cost he made himself personally responsible for it.

**Schools
estab-
lished**

In the winter of 1769 he heard that Sara Banzet was, on her own initiative, teaching the children of Belmont an art almost unknown in the Ban—the art of knitting. In order to overcome her father's objection that she was wasting her time, Oberlin took her into his own service, and she thus became the first of his *conductrices de la tendre jeunesse*. Her example was followed by others, notably by Louise Schepler, who was for sixty years the most devoted of Oberlin's fellow-workers in the cause of infant education.¹

**The first
teachers
of infants**

Oberlin started with a clear perception of the ends

¹ In 1829 the Académie française recognised her noble service to humanity by awarding her the Montyon grand prix de vertu. She accepted the prize, but would not accept the honour which Cuvier in his report ascribed to her of originating the idea of Infant Schools. That, she said, was due to "Papa Oberlin" alone.

6 Infant Schools, their History and Theory

to be attained and of the principles to be applied, but it was only by experience that he found how best to apply the principles to attain the ends. His system when perfected embraced three grades—schools for infants, schools for older children, and schools for adults. The aims of the Infant School were :—

- (1) To root out bad habits.
- (2) To cultivate good habits, such as obedience, truthfulness, courtesy, kindness, and neatness.
- (3) To inculcate the first notions of morality and religion.
- (4) To teach the elements of Reading, Writing, and Arithmetic.
- (5) To accustom the children to the use of standard French (instead of patois).

The little ones were assembled in airy, spacious rooms, where the *conductrices* watched over them with motherly care. Amusement had a large part in the scheme. The youngest children played together while the rest were learning to spin, to knit, and to sew. Natural History and Scripture were taught by means of pictures. A good deal of attention was given to drawing, and the painting of maps became one of the home occupations of the long winter evenings. In fine weather the *conductrices* took their charges for walks and made them find the flowers which had been described to them. These formed the subject of familiar talks, and the children were inspired with a desire to grow the flowers, for which purpose the parents willingly gave up little plots of garden.

Oberlin's plans succeeded beyond expectation, and when his fame was noised abroad bene- **A Paris**
volent persons from various parts of France **copy**
as well as from foreign countries visited his mountain home to study them at first hand. In 1801 Mme. de Pastoret established in Paris a *salle d'hospitalité* somewhat on the model of his Infant Schools; but the "pupils" were so very young as to need nurses rather than teachers, and the experiment failed. The original of the *salles d'asile* (which ultimately developed into the *écoles maternelles* or Infant Schools of France) must, therefore, be traced not to Ban de la Roche but to New Lanark,—not to an exemplary minister but to a philanthropic cotton-spinner.

ROBERT OWEN.

IT is beyond dispute that Oberlin's Infant School was opened about forty years before Owen's, **Owen's school not a copy** but it is, I think, equally beyond dispute that the idea of the second¹ was not in the least borrowed from the first. There is no proof and hardly any probability that Owen had ever heard of Oberlin,² and if Oberlin had never existed an Infant School would have been the inevitable product of two factors,—Owen's views on the formation of character and an opportunity of bringing those views to the test of experiment.

Robert Owen was born on the 14th of May, 1771, at Newtown, in Montgomeryshire. An admirer **Biography** professed to have traced his descent from the princes of North Wales, but Owen himself could not trace it beyond his grandfathers, a saddler and a farmer. At five years of age he was sent to a

¹ In the introduction to a translation of Pestalozzi's *Letters on Infant Education* (p. xxxvii.), J. P. Greaves says that an Infant School had existed at Lippe Detmold, in Saxony, since 1802, but I have searched in vain for any further information respecting it.

² In 1818 (that is, after the establishment of his own school) Owen visited a famous school conducted by "Père Oberlin" at Fribourg, in Switzerland, but I cannot discover any connection between the Protestant pastor and the Franciscan father.

school kept by "a Mr. Thickness or some such name"; at seven he became an usher in the school! and at nine an assistant in one of those mixed shops still to be found in small country towns. At ten he went to London, whence he proceeded to Stamford to be apprenticed to a draper. When his apprenticeship was over he served as an assistant in London for half a year and in Manchester for four years, but before he was nineteen he started with another man to make cotton-spinning machinery. Though the venture prospered, Owen, before long, sold his share and accepted an appointment as manager of a very large mill. He showed a rare capacity for business, and a rarer skill in managing workmen, which became profitable to himself when, at the age of twenty-three, he formed the Chorlton Twist Company.

David Dale, a Glasgow merchant, having made the acquaintance of Arkwright, decided to **David** build cotton spinning mills. Watt's steam **Dale** engine had not yet been perfected, and Dale chose a site near Lanark where he could utilise the Falls of the Clyde to give the necessary power. Owen, in his frequent visits to Scotland on business, made the acquaintance of one of Dale's daughters, and the young people fell in love with each other. To prepare the way for a more intimate connection, Owen proposed that he and his partners should buy the mills. Dale, now old and wealthy, was willing to sell. Owen was married on the 30th of September, 1799, and three months later he took up his duties as managing director, and began that series of industrial and social

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experiments which made New Lanark the talk of Europe.

What the condition of the place was in 1800 we learn from Owen himself. In the first part of the *New View of Human Society*, published in 1813, he lays down certain principles, and argues that the people among whom these were carried into practice could not fail to be virtuous, prosperous, and happy. He imagines an unfriendly critic exclaiming, "All this is very delightful and very beautiful in theory, but visionaries alone can expect to see it realised". And he answers, "These principles have been carried most successfully into practice, and that not among a few individuals but among thousands, and not for one or two years but for twenty".

In the second part Owen gives full details in support of this statement. The mills were begun in 1784. The surrounding district was very sparsely populated and the native peasantry "disdained the idea of working early and late, day after day," within four walls. "Hands," therefore, could be obtained in only two ways,—by procuring children from the various public charities and poorhouses of the country, and by inducing families to settle near. Five hundred children were imported, chiefly from Edinburgh; a large house was erected to accommodate them, and they were fed, clothed, and educated "with the unwearied benevolence which" Mr. Dale displayed throughout his life. For the adults a village was built and the flats were let at low rents, but only

the outcasts of society could be persuaded to qualify for living in them. Furthermore, Mr. Dale's home being at a distance, he seldom visited the works, and the management was left to servants. Consequently "lawlessness, vice, and immorality prevailed — idleness, poverty, crime, sickness".

"The boarding house, however, containing the children presented a very different scene. The benevolent proprietor spared no expense which could give comfort to the poor children which it contained. The rooms provided for them were spacious, always clean and well ventilated; the food was of the best quality and most abundant; the clothes were neat and useful; a surgeon was kept in constant pay to direct how to prevent as well as to cure disease; and the best instructors which the country afforded were appointed to teach such branches of education as were deemed likely to be useful to children in their situation. Kind, well-disposed persons were appointed to superintend all the proceedings. Nothing, in short, at first sight, seemed wanting to render it a most complete charity.

"But to defray the expense of these well-devised arrangements, and support the establishment generally, it was absolutely necessary that the children should be employed within the mills from six o'clock in the morning to seven in the evening, summer and winter, and after these hours their education commenced. The directors of the public charities, from mistaken economy, would not consent to send the children under their care to cotton mills unless the children

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were received by the proprietors at the ages of six, seven, and eight. And Mr. Dale was under the necessity of accepting them at those ages or of stopping the manufactory which he had commenced.

"It is not to be supposed that children so young could remain, with the interval of meals only, from six in the morning until seven in the evening in constant employment on their feet within cotton mills and afterwards acquire much proficiency in education. And so it proved, for many of them became dwarfs in body and mind and some of them deformed. Their labour through the day and their education at night became so irksome that numbers of them continually ran away, and almost all looked forward with impatience and anxiety to the expiration of their apprenticeship of seven, eight, and nine years, which generally expired when they were from thirteen to fifteen years old."¹

Owen's
"New
View"
Of the various methods by which Owen converted the elders to honesty, sobriety, industry, and order this is not the place to speak. I need only say that these and the methods which he employed with the children were alike based on the principles enunciated afterwards in the *New View*. The fundamental principle was "*that any character, from the best to the worst, from the most ignorant to the most enlightened, may be given to any community, even to the world at large, by applying certain means, which are to a great extent at the command and under*

¹ *New View of Society*, Second Essay, p. 13.

the control, or easily made so, of those who possess the government of nations".¹

The necessary corollary to this is that "the governing powers of all countries should establish rational plans for the education and general formation of the characters of their subjects. These plans will be devised *to train children from their earliest infancy* to think and act aright, for which purpose they must be prevented from acquiring habits of falsehood and deception, from entertaining a wish to injure a fellow-creature ; and they must be impressed with an active and ardent desire to promote the happiness of every individual, and that without the shadow of exception for sect or party or country or climate. Co-existent with these mental attainments plans will also be devised to train children to those habits which generally ensure health, strength, and vigour of body, for the happiness of man can be erected only on the foundation of health of body and peace of mind."²

Describing how he applied this corollary, Owen says : "The system of receiving apprentices from public charities was abolished ; permanent settlers with large families were encouraged in lieu of them, and comfortable houses were built for their accommodation. . . . The practice of employing children in the mills of six, seven, and eight years of age was prevented, and their parents advised to allow them to acquire health and education until they were ten years old. . . . The children were taught Reading, Writing, and Arithmetic during five years, that is, from

¹ First Essay, p. 9.

² *Id.*, p. 19.

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five to ten, in the village school without expense to their parents. All the modern means of education¹ have been adopted or are in process of adoption. . . . Another important consideration is that all their instruction is rendered a pleasure and delight to them ; they are much more anxious for the hour of schooltime to arrive than end ; they therefore make a rapid progress.”²

In the Third Essay (published in 1813), Owen says that when all the greater evils were remedied he turned his attention to the beneficial agencies which were necessary to supplement his remedies. “For this purpose a building, which may be termed the New Institution, was erected in the centre of the establishment with an enclosed area before it. The area is intended as a playground for the children of the villagers from the time they can walk alone until they enter the school.”

In the playground they were superintended by a person instructed to take charge of them. “The uppermost storey of the New Institution” was arranged to serve for a school, lecture-room, and church.³

Writing thus (towards the end of 1812 or the beginning of 1813) Owen speaks of the New Institution as having already been erected, but in an autobiography which he wrote some thirty-five years later he says: “I was surrounded with difficulties to oppose the carrying

¹ That is Lancaster's Monitorial System, with some modifications borrowed from Bell.

² Second Essay, pp. 24-26, *passim*.

³ Third Essay, *passim*.

of my views into practice. To erect and finish a building for my purpose would require an expenditure in the first instance of about £5,000, and a considerable annual outlay afterwards. But this I estimated would gradually be amply repaid by the improved character of the children and the improved condition of the parents. . . . I had to meet the objections of my partners, who were all good commercial men and looked to the main chance, as they termed it, which was a good return for their capital. . . . In making preparation for training the rising generation in the village of New Lanark, I had not the means to create anew the extended arrangements required to give a good and valuable permanent character to all. I was compelled by circumstances to use such means as were placed within my power, and, in consequence of the many obstacles opposed, to proceed only at a snail's pace. I began in 1809 to clear the foundation for the infant and other schools to form the new character of the rising population, but until the 1st of January, 1816, I was prevented carrying my scheme into actual practice by the events to be narrated."¹

From a full consideration of all the facts I have no doubt that, of these contradictory accounts, the second is the more correct.²

¹ *Life of Robert Owen, written by himself*, 1857, vol. i., pp. 84, 85.

² Owen's son says that the foundations were laid in 1809, "but the estimated cost of upwards of £4,000 alarmed his partners, who finally vetoed the enterprise".—*Robert Dale Owen: Threading My Way*, p. 77.

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The first obstacle to be surmounted was the objection of the partners to spend in improving the quality of the workmen any of the profits made by improving the quality of the yarn. This proved insurmountable, and Owen saw that he must get rid either of his new views or of his old associates. He therefore proposed that the partners should buy his share or sell theirs. They agreed to sell for £84,000. As they had paid £60,000 for the business, and had made, over and above 5 per cent. on their capital, £60,000 profit, it was evident that outside education the managing director's ideas were commercially sound.

Thus Owen had no difficulty in getting new partners, but he soon found that he had thrown Jonah over and taken the whale on board. When he began to build, the new partners sent him a formal order not to proceed. Learning that he had ignored it, they sent him a notice which could not be ignored, a notice to dissolve the partnership. He offered to buy them out as he had bought out their predecessors, but they refused his offer, having devised a scheme for both getting possession of the business at a third of its value and delivering themselves from a colleague troubled with philanthropic notions. They said that the mills must be sold by auction, and, pending the sale, diligently disseminated a report that, owing to ruinous administration, they were then not worth more than £40,000.

Owen could not afford to buy the property alone, but among the members of the British and Foreign

School Society—William Allen, Joseph Fox, Joseph Foster, Jeremy Bentham, John Walker and **Congenial partners** others—he found wealthy men in sympathy with his views, and willing to furnish whatever capital might be requisite. The auction took place at Glasgow on the last day of the year 1813,¹ and the tricksters were outbid, the property being knocked down at £114,100.² The Institute, of which the schools formed a prominent part, was now pushed forward energetically, and it was opened on the 1st of January, 1816.

The extracts already quoted from the *New View* show that Owen thought children should be trained “from their earliest infancy to think and act aright”. The concurrence **The New Institution at work** of his new associates now gave him the power, and the opening of the new buildings the opportunity, of carrying his notions to their logical conclusion. Babies were therefore admitted as soon as they could walk, and they were kept till their parents could no longer be refrained from sending them to the mills. Of what was done and what was attempted in the Institution no summary or paraphrase can be so interesting as Owen’s very words, which I shall therefore give.

During the sessions of 1816 and 1818 a Select Committee of the House of Commons, with Brougham as chairman, sat “to inquire **Owen’s account of it** into the Education of the Lower Orders of the Metropolis”. On the 11th of June, 1816, Owen

¹ *Life of William Allen*, vol. i., p. 181.

² The partners had felt so confident of the success of their plans that they had invited their friends to a banquet in celebration of their

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appeared as witness, and the following is part of his examination :—

“Have you found the parents are too apt to take children out of the school as soon as they can perform the mechanical parts of reading and writing fluently, and, as the parents think, exceedingly well, without perhaps having their minds much opened?—I have found that practice very generally to prevail.

“Do you not esteem it a great evil, and one which should, if possible, be counteracted?—I esteem it a very great evil.

“Do you think that it would be an improper sacrifice with respect to mere reading and writing, if a child were not to advance so very rapidly in them as to induce its parents to take it away before its mind were in a measure opened and its good habits tolerably well formed?—In lieu of considering it to be any sacrifice made upon the part of the parent or child, I think it would be a benefit to both.


“Has it ever happened to you to observe the bad effects produced on the dispositions of children from the extremely rapid progress in mere reading and writing,—that they become self-conceited in consequence?—I have found the children have derived very little benefit from being rapidly instructed in reading and writing, particularly when no attention has been given on the part of the superintendent to form their dispositions and their habits.

victory. As they sat somewhat crestfallen one of the guests proposed the health of those favourites of fortune who had just sold for £114,100 property which they had valued at £40,000.

- “What is the plan adopted by you?—The children are received into a preparatory or training school at the age of three, in which they are perpetually superintended, to prevent them acquiring bad habits, to give them good ones, and to form their dispositions to mutual kindness and a sincere desire to contribute all in their power to benefit each other ; these effects are chiefly accomplished by example and practice, precept being found of little use, and not comprehended by them at this early age ; the children are taught also whatever may be supposed useful, that they can understand, and this instruction is combined with as much amusement as is found to be requisite for their health, and to render them active, cheerful, and happy, fond of the school and of their instructors. The school, in bad weather, is held in apartments properly arranged for the purpose ; but in fine weather the children are much out-of-doors, that they may have the benefit of sufficient exercise in the open air. In this training school [that is, the Infant School] the children remain two or three years, according to their bodily strength and mental capacity ; when they have attained as much strength and instruction as to enable them to unite, without creating confusion, with the youngest classes in the superior school, they are admitted into it ; and in this school they are taught to read, write, account, and the girls, in addition, to sew ; but the leading object in this more advanced stage of their instruction is to form their habits and dispositions. The children generally attend this superior day school until they are ten years old, and they are instructed in

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healthy and useful amusements for an hour or two every day during the whole of this latter period. Among these exercises and amusements they are taught to dance ; those who have good voices to sing ; and those among the boys who have a natural taste for music are instructed to play on some instrument. At this age both boys and girls are generally withdrawn from the day school and are put into the mills or to some regular employment. Some of the children, however, whose parents can afford to spare the wages which the children could now earn, continue them one, two, or three years longer in the day school, by which they acquire an education which well prepares them for any of the ordinary active employments of life. Those children who are withdrawn from the day school at ten years old and put into the mills or to any other occupation in or near the establishment are permitted to attend, whenever they like, the evening schools, exercises, and amusements, which commence as from one to two hours, according to the season of the year, after the regular business of the day is finished, and continue about two hours ; and it is found that out of choice about 400 on an average attend every evening. During these two hours there is a regular change of instruction and healthy exercise, all of which proceed with such order and regularity as to gratify every spectator, and leave no doubt on any mind of the superior advantages to be derived from this combined system of instruction, exercise, and amusement. The 400 now mentioned are exclusive of 300 who are taught during the day. On



the Sunday the day scholars attend the school an hour and half in the morning and about the same time in the afternoon ; and the evening scholars, as well as their parents and other adults belonging to the establishment, attend in the evening, when either some religious exercises commence or a lecture is read, and afterwards the regular business of the evening Sunday school begins. These proceedings seem to gratify the population in a manner not easily to be described, and, if stated much below the truth, would not be credited by many ; inspection alone can give a distinct and comprehensive view of the advantages which such a system affords to all parties interested or connected with it.

“ How many masters have you in the day schools ?— Generally ten or eleven ; in the evening schools usually two or three more.

“ Is the expense of this institution considerable ?— It is, apparently ; but I do not know how any capital can be employed to make such abundant returns as that which is judiciously expended in forming the character and directing the labour of the lower classes.”

At the close of his evidence Owen handed in a table, from which it appeared that there were then 246 boys and 198 girls in the school, and that of these sixty were three years old, forty-six four years old, fifty-nine five years old, forty-eight six years old, and the remaining 231 from seven to ten years old.

In his autobiography Owen says the infants were received “ at one year old or as soon as they could

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walk. The parents at first could not understand what I was going to do with their little children at *two* years of age, but seeing the results produced they became eager to send their infants at one year old, and inquired if I could not take them yet younger. . . .

Age of infants "The children were trained and educated without punishment or any fear of it, and were, while in school, by far the happiest human beings I have ever seen.

No punish-ment "The infants and young children, besides being instructed by sensible signs — the things themselves, or models, or paintings—and by familiar conversation, were, from two years and upwards, daily taught dancing and singing."¹

Object teaching Owen considered the classes for infants the most important department of his school, "knowing that if the foundation was not truly laid it would be in vain to expect a satisfactory structure". He experienced some difficulty in finding for it teachers able and willing to carry out his views. He first tried "a good obstinate dominie of the old school," and could not have been much surprised that such a master "could not and would not attempt to adopt what he deemed to be . . . 'new-fangled'" ideas. "I had therefore," he says, "to seek among the population for two persons who had a great love for and unlimited patience with infants, and who were thoroughly tractable and willing unreservedly to follow my instructions. The best, to my mind, in these respects that I could find

¹ *Life*, vol. i., p. 134.

in the population of the village was a poor, simple-hearted weaver named James Buchanan, **James Buchanan** who had been previously trained by his wife to perfect submission to her will, and who could gain but a scanty living by his now oppressed trade of weaving common plain cotton goods by hand. But he loved children strongly by nature, and his patience with them was inexhaustible. These, with his willingness to be instructed, were the qualities which I required in the master for the first rational Infant School that had ever been imagined by any party in any country. . . .

"Thus the simple-minded, kind-hearted James Buchanan, who at first could scarcely read, **Mary Young** write, or spell, became the first master in a rational Infant School.¹ But infants so young also required a female nurse to assist the master, and one also who possessed the same natural qualifications. Such an one I found among the numerous young females employed in the cotton mills, and I was fortunate in finding for this task a young woman about seventeen years of age, known familiarly among the villagers as 'Molly Young,' who, of the two, in natural powers of mind had the advantage over her new companion in an office perfectly new to both.

¹ Buchanan left New Lanark in 1818 to take charge of an Infant School in Westminster. "I now had to appoint and instruct a successor to James Buchanan, and soon one of the new-trained pupils who had passed through our schools and who was therefore much in advance of his former master as a scholar and in habits became greatly his superior."—Owen, *Life*, vol. i., p. 142.

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"The first instruction which I gave them was that **No punishment** they were on no account ever to beat any one of the children or to threaten them in any manner in word or action or to use abusive terms ; but were always to speak to them with a pleasant countenance and in a kind manner and tone of voice. That they should tell the infants and children (for they had all from one to six years old under their charge) that they must on all occasions do all they could to make their play-fellows happy. . . . These instructions were readily received by James Buchanan and Molly Young, and were faithfully adhered to by them as long as they remained in their respective situations.

"The children were not to be annoyed with books, **No books** but were to be taught the uses and nature or qualities of the common things around them by familiar conversation, when the children's curiosity was excited so as to induce them to ask questions respecting them.

"The room for their play in bad weather was **Rooms** 16 ft. by 20 ft. and 16 ft. high. The schoolroom for the infant instruction was of the same dimensions and was furnished with paintings, chiefly of animals, with maps, and often supplied with natural objects from the gardens, fields, and woods, the examination and explanation of which always excited their curiosity and created an animated conversation between the children and their instructors, now themselves acquiring new knowledge by attempting to instruct their young friends."¹

¹ *Life*, vol. i., p. 139.

There are several independent accounts of the school. The fullest is *An Outline of the System of Education in New Lanark*, published in 1824 by Owen's son, Robert Dale. He confirms all that is said by his father as to the spirit and mode of government. "All rewards and punishments whatever, except such as Nature herself has provided . . . are sedulously excluded as being equally unjust in themselves and prejudicial in their effects.¹ . . . A child who acts improperly is not considered an object of *blame* but of *pity*.² . . . In cases where admonition is necessary it is given in the spirit of kindness and of charity as from the more experienced to the less experienced.³ . . . No unnecessary restraint is imposed on the children; but, on the contrary, every liberty is allowed them consistently with good order and attention to the exercise in which they may be engaged.⁴ . . .

"The New Institution⁵ . . . consists of two storeys. The upper storey . . . is divided into two apartments; one which is the principal schoolroom [for older pupils] fitted up with desks and forms on the Lancasterian plan . . . is about 90 ft. long, 40 ft. broad and 20 ft. high. It is surrounded, except at one end where a pulpit stands, with galleries which are convenient when this room is used, as it frequently is, either as a lecture-room or place of worship. The other apartment on the second floor is of the same width and height . . . but only 49 ft. long. . . . At one end there is a gallery adapted for the pur-

¹ P. 9.² P. 15.³ P. 16.⁴ P. 26.⁵ P. 28.

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pose of an orchestra. . . . This room is used as a lecture and ball room, and it is here that the dancing and singing lessons are daily given. It is likewise occasionally used as a reading-room for some of the classes.

"The lower storey is divided into three apartments of nearly equal dimensions, 12 ft. high. . . . It is in these three apartments that the younger classes are taught.¹

"The hours and attendance [for the older pupils]

Hours . . . are from half-past seven till nine, from ten till twelve and from three till five in the afternoon. In winter, however, instead of coming to school again in the afternoon from three to five, the children remain from ten till two o'clock. . . . The infant classes, from two to five years, remain in school only half of the time. . . . During the remainder of the time they are allowed to amuse themselves at perfect freedom in a large paved yard in front of the Institution under the charge of a young woman. . . .

"The dress worn by the children in the day school,
Dress both boys and girls, is composed of strong white cotton cloth of the best quality that can be procured. It is formed in the shape of the

¹ In July, 1903, I made a pilgrimage to New Lanark. With the exception of the church and the electric light installation the outward aspect of the village is practically the same as in Owen's time; and, if it had been erected but recently, it would rightly be regarded as an admirable manifestation of a modern landlord's enlightened philanthropy. The building of the New Institution still stands, though the court where Owen's infants played is now covered with weeds, and the rooms are no longer used for school purposes. One of them is used regularly for the recreation of the mill "hands" and others occasionally for lectures, etc. One had been used for a wedding on the day before my visit.

Roman tunic and reaches in the boys' dresses to the knees, and in those of the girls to the ankle. These dresses are changed three times a week that they may be kept perfectly clean and neat.¹

"The parents of the older children pay threepence a month for their instruction. Nothing is paid for the infant classes. . . . This charge **Fees** is intended merely to prevent them from regarding the Institution with the feelings connected with a charity school."

It was part of Owen's original plan that books should be entirely excluded from the Infant **Reading in the Infant Classes** School, but circumstances were evidently too strong for him. His son (writing in 1823) says: "It has been deemed necessary, in order to meet the wishes of the parents, to commence teaching the children the elements of reading at a very early age, but it is intended that this mode should ultimately be superseded, at least until the age of seven or eight, by a regular course of Natural History, Geography, Ancient and Modern History, Chemistry, Astronomy, etc., on the principle that it is following the plan prescribed by Nature to give a child such particulars as he can easily be made to understand concerning the *nature and properties* of the different objects around him before we proceed to teach him the *artificial signs* which have been adopted to represent these objects".

¹ "He [Owen] even at one time [gratuitously] clothed the whole of these children in a beautiful dress."—*R. Owen at New Lanark, By One formerly a Teacher at New Lanark, 1839, p. 13.*

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Owen, having a good deal more than the average share of vanity, did not try to hide his light under a bushel. He sent copies of the *New View* to all the sovereigns of Europe and their chief ministers, to Napoleon in Elba, and to the leading politicians of America. Whether he also brought himself, or whether he only came, under the notice of the Duke of Kent, the father of our late Queen, I cannot say ; but no one with a scheme of educational or economic reform found it difficult to obtain the ear of the patron of Lancaster and chairman of the committee which framed the constitution of the British and Foreign School Society. The Duke often called on Owen in London, became president of a movement for promoting his plans, and, only a little while before his lamented death, promised to spend three months in New Lanark with the Duchess and the young Princess Victoria. Before, however, marking his approval in so decided a fashion, the Duke commissioned a man of like interests, his honorary physician, Henry Grey Macnab, to go down to Scotland to investigate. The doctor's report was published in 1819 under the title "The New Views of Mr. Owen of Lanark impartially examined, as rational means of ultimately promoting the productive Industry, Comfort, Moral Improvement, and Happiness of the Labouring Classes of Society and of the Poor ; and of training up Children in the Way in which they should go ; also Observations on the New Lanark Scheme, and on the Systems of Education of Mr. Owen, of the Rev. Dr. Bell, and

Owen and
the Duke
of Kent

Dr.
Macnab's
Report

that of the New British and Foreign System of Mutual Instruction”.

The chapter “On the System of Education of Mr. Owen” consists only of approving comment, but elsewhere Macnab quotes a detailed account by one of the deputies whom the town of Leeds sent to examine the establishment. With regard to the school this contains no facts which have not been already given, but the impressions of an unprejudiced stranger are interesting. The deputy says :—

**A Leeds
Deputy's
Report**

“The school for the children of two or four years old was our first object, and a more pleasing sight to the philanthropist is not to be found from Johnny Groat’s House to the Land’s End. The glow of health, of innocent pleasure, and unabashed childish freedom mantled on their pretty countenances. This melting sight gave me a pleasure which amply repaid the toils of the journey.¹ . . .

“After calling on Mr. Owen at Braxfield House [where he lived], our party walked down to the village and entered the children’s playground. God bless their little faces, I see them now. There were some bowling hoops, some drumming on two sticks, all engaged in some infantine amusement or other. Not a tear, not a wrangle; peaceful innocence pervaded the whole group. As soon as they saw us curtsies and bows saluted us from all quarters. Mr. Owen seemed here to be among his own imaginary improved state of society. You know that he sup-

¹ P. 100.

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poses that all human beings are the creatures of circumstances. Hence he contends that if he had a colony of infants, by suppressing all erroneous reasoning and conclusions upon all subjects and substituting *truth*, . . . he could make men . . . unite in a community of interest that would have the effect of producing brotherly love and unity through the world. These results and many others which I have not time to mention, Mr. Owen will have it that he can bring about in society by the means of children.¹ . . .

"From the playground we entered a large room for the purpose of play and amusement, when the weather will not permit them to be out of doors. Here the most unrestrained liberty is given for noise or amusement. On each side of the room are schools for this class of children, whose ages are two years old to six. Some are taken to the upper school at so early a period as four years, having attained the learning necessary for their advancement."²

Macnab also quotes³ the headmaster's statement (dated 25th September, 1819) of the "Daily routine in Routine of the New Lanark Institution".
Daily routine in 1819

The following are the passages referring to the youngest pupils :—⁴

"The centre room on the ground floor is set apart for the exercise and amusement of children from two to four years of age. In fine weather they generally prefer the large area which is in front of the building

¹ P. 104.

² P. 105.

³ P. 221.

⁴ A table (p. 95) shows the population of New Lanark on 30th June, 1819, to be 2,293, of whom 482 were under seven years of age.

and regularly walled in, and kept shut during the hours of teaching. The children of this class, as soon as they have acquired habits of speaking, are taken in rotation in classes of ten or twelve into the room on the left hand, where they are taught the letters of the alphabet, monosyllables, etc. They have a teacher and three female attendants, who train them up in the paths of virtue and watch over their growing infancy. This class is called the Infant School.¹

"The room on the left is occupied by children of four to six years of age. They are taught to read short and easy lessons adapted to their capacities ; they are permitted to amuse themselves and to receive lessons alternately during the day."

Owen was disposed not only to hold but to make a parade of extreme opinions. His views on economics gradually tended to Socialism,² and in 1819 he publicly announced himself opposed to all religions if not to all religion. Thenceforward his influence with sober thinkers and with the ruling class gradually declined. Men were afraid of joining him in work with which they did sympathise lest they should be suspected of agreeing with him in unpopular beliefs with which they did not sympathise. The effect was felt even in the schools. William

**Owen's
religious
opinions**

¹ Wilderspin tried to persuade himself (and others) that he invented the term "Infant School". We here see it in use while Wilderspin was still a merchant's clerk.

² In estimating the national debt to Owen it must not be forgotten that in addition to our Infant Schools we owe him our Co-operative Societies. These societies have fittingly perpetuated his memory in a public library at Newtown.

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Allen and Joseph Foster were devout Quakers ; most, if not all, of the other partners were orthodox Christians, and though nothing could be more complete than Owen's practical toleration they were afraid that his authority and example might conduce to infidelity. In the original deed of partnership the use of the Bible in the schools was "made a *sine quâ non*,"¹ but Allen was afraid that Owen would not adhere loyally to the conditions. Writing to him in October, 1815, Allen says : "It is now the general opinion that my friend is the determined enemy of all revealed religion, and that he is anxious for nothing so much as to prove in the instance of such an establishment as Lanark that the world has been grossly abused down to the present time in being required to believe that the Divine Being had at any time . . . communicated His will and purposes to any of His rational creatures ; that the Scriptures were mere idle tales, and one of the causes of the miseries which exist in the world. Now, if this opinion of the public be correct, we have indeed reason for bitter complaint. We came into the concern not to form a manufactory of infidels but to support a benevolent character in plans of a very different nature, in which the happiness of millions and the cause of morality and virtue are deeply concerned."²

In May, 1818, Allen and Foster visited Lanark and inquired of the minister about the moral state of the people at the mills. "He said he was not aware of

¹ *Life of William Allen*, vol. i., p. 209.

² *Id.*, vol. i., p. 244.

any case of drunkenness for a year or two past, and he did not think that Owen's principles took any root among the population."¹

The fears of the pious partners were allayed for a time, but revived as Owen's opinions grew more pronounced. At length (in January, 1824) the direction of the schools was taken away from their founder; "the London proprietors . . . provided a well-trained master from the Borough Road, and completely carried their point on the very important subject of the education of the children, as well as with regard to some other arrangements calculated to benefit the population and promote the religious improvement of all classes".²

Owen was, of course, dissatisfied with the curtailment of his powers, and in 1829 he withdrew altogether from that New Lanark where he had created much and recreated more. How long the schools which he had established survived his departure I have not been able to discover.³

It has already been stated that Mme. de Pastoret in 1801 opened in Paris a *salle d'hospitalité* on the model of Oberlin's, but the experiment failed, and nothing more was done till 1825, when she happened in a drawing-room to hear described the Infant

¹ *Life of William Allen*, vol. i., p. 345.

² *Id.*, vol. ii., p. 374.

³ The remainder of Owen's life was devoted to the propagation of co-operative, socialist, and spiritualist opinions. He died at Newtown on the 17th of November, 1858.

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Schools which had by this time been opened in London. She formed a committee of ladies and made a fresh start in the Rue de Bac in April, 1826. The movement attracted the attention of the benevolent M. Cochin, mayor of the twelfth arrondissement, who with Mme. Millet spent a year in England studying the system *sur place*. The *salles d'asile* which were then instituted grew into the *écoles maternelles* and the *écoles enfantines* of a later date.¹ Thus the only foreign country in which the Infant School is an important and integral part of the public school system owes something to Robert Owen.

¹ For a fuller account of these see Sadler's *Special Reports*, vol. viii., pp. 263 *et seqq.*

JAMES BUCHANAN.

A FRESH plan for the regeneration of mankind is published nearly every year; few people except the friends to whom the author sends presentation copies ever see it; and even they forget all about it before the next plan appears. Owen's plan might have shared the common lot had it been confined to the cold type of the *New View*, but, with a paying business and a prosperous population as illustrations, it attracted European notice. Robert Dale says that he had seen as many as seventy visitors in the mills at once, and that from 1815 to 1825 the Visitors' Book had nearly twenty thousand entries, the names including those of a Russian Grand Duke (afterwards Czar), two Austrian princes, a reigning duke, a Saxon ambassador,¹ and many other foreigners who had been born great or had achieved greatness. As for British peers and members of Parliament they were like silver in the days of Solomon, "nothing accounted of". Some were brought by simple curiosity, more by an interest in economic problems; most left with a great admiration for Owen's work, a few accepting

Spread of
Owen's
views

¹ Whose sovereign sent Owen a gold medal.

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his social principles, and a few, while not accepting his principles, determined to copy some part of his plans. Among the last was Brougham, who, speaking in the House of Commons in December, 1819, said "that he differed from Owen's views, but in the details of his plans there was much deserving of notice, especially the training of young children".

Brougham went on to add: "An experiment on the subject, in which several benevolent individuals had concurred with himself, was then trying not far from that place. Mr. Owen . . . had given one of his own superintendents. The school . . . was on Brewer's Green, Westminster," whence it was soon afterwards removed to Vincent Square, almost under the shadow of the Abbey.

The "experiment" began in 1818; the "benevolent individuals" were James Mill (the father of the political economist), John Smith (Member of Parliament for Norwich, and one of the band of Abolitionists), the Marquis of Lansdowne, Zachary Macaulay (the father of the historian), Thomas Babington (Zachary's brother-in-law), Lord Dacre, Sir Thomas Baring, William Leake, M.P., Henry Hase (cashier of the Bank of England), Benjamin Smith, John Walker, and Joseph Wilson (of whom we shall hear again). The "superintendent" was James Buchanan.

All that is known of the antecedents of Buchanan has already been stated.¹ Of his transfer to London Owen says: "Lord Brougham,² John Smith, and Henry Hase had frequently visited New Lanark and

¹ *Ante*, p. 22.

² He was not Lord Brougham till 1830.

enjoyed the goodness, happiness, and intelligence of the children in these rational surroundings constituting the institution for the formation of this new character ; and, being benevolent men, they naturally desired that so much goodness and happiness should be, if possible, extended to all other poor children. They asked me whether, if they could form a party to establish one in London, I would give them James Buchanan to be the master of their school. I replied : ' Most willingly, for I have pupils who can take his place without any injury to my school '.

" I had thought from the daily instruction which, when at the establishment, I had, as it were, drilled into him for years that he could now act for himself in a practice which under my direction . . . appeared so easy to execute. But I found he could proceed no further in the practice than he had done for some time.

" The gentlemen named formed a party to carry the proposed scheme into practice, and a school was erected and furnished, . . . and he was appointed master with full powers over the school. . . .¹

" When James Buchanan went to London to organise and take charge of the first Infant School **Buchanan** intended to be after the model of the original **in London** school at New Lanark . . . I had to remain at the establishment much longer than usual, to instruct my young new infant-school-master in the advanced measures which I wished him to adopt. . . .

" Simple and weak-minded as poor Buchanan was, I had taken so much time and trouble to instruct him

¹ *Life of Robert Owen*, vol. i., p. 142.

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and had so endeavoured continually to arouse his energies to perceive the importance of the task committed to him that I fully expected he would in his new position organise and establish his new school after the model of the first with which he had been made so familiar in its practice. But great were my surprise and horror when I first visited the second Infant School. . . . On entering the school the first object which I saw was *Mrs.* Buchanan, whom I had never seen in the New Lanark school, brandishing a whip and terrifying the children with it! Buchanan I saw in another part of the room without authority or influence, and as much subject to his wife as the children. Upon my unexpected appearance an attempt was made to hide the whip, but the countenances of the children were so different from the open, frank, and happy expression of my children at New Lanark that they at once told me their position, and the extent of ignorant management to which they had to submit. The room was something of the form of one of the New Lanark infant rooms, but the school was governed in the spirit and manner of the old irrational schools, with the difference only that the children were younger than those received in the old schools.”¹

Owen wrote this account nearly forty years after the event, when most of his experiments had failed, when most of his opinions were discredited, when persistent efforts had been made to deprive him of the honour of originating Infant Schools, and when the great influence which he had once exerted was

¹ *Life of Robert Owen*, vol. i., p. 152.

forgotten (except by himself), and when his vanity, therefore, had grown doubly sensitive. It is possible that Buchanan was the poor tool which he is represented, but it is also possible that Owen, anxious to prove that no Infant School had ever equalled his own, may have been disposed to depreciate all others. One thing is certain, that Wilderspin, the chief apostle of the movement, obtained his instruction, if not his inspiration, from Buchanan.

How long Buchanan remained in London and whether the school was continued after he left I cannot say. A writer in the *Westminster Review* for 1847 (who decries Wilderspin and praises Buchanan) says that it was then extinct, and that Buchanan "as a Moravian or Swedenborgian¹ teacher . . . was opposed by the Church, and . . . never, on that account, had a chance of success in the neighbourhood of the Sanctuary, the headquarters of the National School Society".²

Wilderspin, writing in 1829, says: "I would particularly mention . . . we never had a serious accident from the introduction of the swing, and I was informed by Mr. Buchanan, when master of the Westminster Infant School, that during the seven years he had been a teacher there . . . he never knew of any such thing happening to one of the children";³ whence we

¹ I think that he must have been a Swedenborgian, as we know Wilderspin was, and Wilderspin was introduced to Buchanan by Mr. Goyder, the minister of the New Jerusalem Church in Waterloo Road, of which Wilderspin was clerk.

² Vol. xlv., p. 222.

³ *Infant Education*, 4th ed., p. 245.

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may infer, if Wilderspin is to be interpreted by the ordinary rules of composition, that Buchanan was still at Vincent Square in 1825, but had left before 1829.

In *Early Discipline* (published in 1840) Wilderspin, describing his missionary journeys, notes that in the neighbourhood of Derby, "I found Mr. Buchanan. . . . He had been for some time in charge of a school supported by a lady, but as two of his children were apprenticed in London [Wilderspin adds in a footnote, "They are now infant teachers in South Africa"] he and his wife were not very comfortable. I therefore wrote to some friends respecting him, who engaged him for a school in the Metropolis, where, I am glad to say, he now is."¹ Wilderspin's narrative is so jumbled, he supplies so few dates, and disregards chronological order so completely, that it is impossible to determine when he met Buchanan near Derby, and not safe to assert that the "now" meant 1840. If it did, Buchanan was near the end of his residence in England, for the *Westminster* article already quoted says explicitly that he "left this country about six years back for the Cape of Good Hope"—doubtless to be near his sons.

It is a pity that we do not know more about him, as, even if he deserved to be depreciated by Owen and patronised by Wilderspin, he undoubtedly was the first master of the first Infant School in Scotland, and of the first in England.

¹ P. 87.

SAMUEL WILDERSPIN.

WILDERSPIN traversed every part of the United Kingdom again and again, delivering lectures on the utility of Infant Schools and helping to establish and organise such schools where his eloquence had carried conviction ; his services to education brought him a Civil List pension ; he lived in the full blaze of publicity for more than thirty years ; he left behind him some half-dozen works in which he frequently describes his own movements and advances his own claims ; and he has been dead less than forty years ; yet singularly little is known of his personal history.

Even the date of his birth is not known. The year was probably 1792 ; the place was Hornsey, though the boy was brought up in London.¹ His education could not have been extensive ; when it was completed he became a clerk in a merchant's office. In religion Wilderspin was a Swedenborgian,² and

¹ "As I have had much experience from being brought up in London I am perfectly aware of the snares and dangers that the children of the poor are liable to fall into."—*On the Importance of Educating the Infant Children of the Poor*, 1823, p. 112.

² He did not remain a Swedenborgian to the end of his life. He writes in 1845 : "I am a member of the Established Church, worship within her walls, communicate at her table, and am instructed by her ministers".—Preface to *A Manual for the Religious and Moral Instruction of Young Children*.

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while still a youth he became an office-bearer in the New Jerusalem Church, Waterloo Road. By the minister, Mr. Goyder, he was introduced to James Buchanan.

Wilderspin says : " Every reflecting mind, perhaps, has some favourite topic of thought ; and mine was directed at an early period of life to the instruction of the young. Naturally fond of children, I pitied their state both as altogether neglected and improperly treated under existing systems, and many schemes were revolved for the improvement of their condition. I observed them in the streets, in the dwellings of their parents, and in all the dame schools to which I could gain access ; thus the conviction increased that a new order of things was most devoutly to be desired, and that it was urged on us alike by patriotism, philanthropy, and piety. . . . Some years elapsed, but no opportunity arose for practical effort, when accidentally, or, rather, providentially, I met at the house of a friend [doubtless the Rev. Mr. Goyder] Mr. James Buchanan, who was actively engaged in a *new* experiment. He had been brought by some noblemen and gentlemen from New Lanark to superintend an *asylum* in Westminster . . . for children of the very lowest class varying from *two* to *eleven* years of age. Our conversation turned on early education ; I explained to him my views, and the result was an application to me a few days after by a member of the Committee of Management to take the superintendence of a similar but more commodious establishment about to be formed in another part of London.

Struck by the coincidence with my wishes and feelings, I acquiesced after some deliberation, relinquished my engagements in business, and subsequently suggested that the intended institution should be called an *Infant School*, and that it should be confined to children from the age of *two* to *seven*.”¹

The “other part of London” was Quaker Street, Spitalfields, and the “member of the Committee” was Joseph Wilson, who not only provided the building but bore the whole expense of maintenance.

Wilderspin implies, if he does not actually assert, that he invented the term “Infant School,” and before the end of his life he persuaded himself and tried to persuade others that he had invented the thing also. We have already seen both the term and the thing at New Lanark, but it will be interesting to trace the growth of Wilderspin’s pretensions, and the consequent change in his attitude towards Robert Owen.

Wilderspin and Owen

In 1823 he writes: “Having taken the liberty of mentioning the name of Mr. Owen, I take this opportunity of returning my sincere thanks to that gentleman for having visited the Spitalfields Infant School three or four times. He has been pleased to express his approbation of the system there pursued, and during these visits has dropped many useful hints, for which I beg most humbly to thank him.”²

In the preface of the 1829 edition of the work just

¹ *Early Discipline*, 1840, p. 2.

² *On the Importance of Educating the Infant Children of the Poor*, p. 108.

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quoted (re-christened *Infant Education*) Wilderspin says: "There is one point on which I feel it imperative, before concluding, to say a few words, and that is as to the origin of the system developed in the pages of this volume and practised in the Infant Schools established throughout the kingdom. It has been ascribed to Pestalozzi. That he might long ago have [*might have but had not*] practised a similar system I should not have denied had it been asserted, but after having put forth the former editions of this work without any acknowledgment to that individual or to any one else it becomes me to state the simple facts of the case. The first edition of this work was written before I had read a single work on the subject of infant education by that individual or any other, and the plan described in it was that which Necessity, the long-reputed mother of Invention, taught me during my labours as master of the Spitalfields Infant School."¹

Later in the same volume Wilderspin says: "The first idea of an Infant School was suggested by the asylums provided by Mr. Owen, of New Lanark, for the infant children of the adult part of the population. That they might not be an hindrance to the daily labours of their parents they were put under the charge of several women and the whole under the superintendence of one man, Mr. Buchanan. Instead of wandering about the streets [of a village!] unprotected, liable to accidents or to form bad associations, these children were observed to be taken care

¹ P. viii.

of and made happy; amusement and exercise for them were not forgotten, and they were frequently seen dancing and capering about to the sound of a flute. . . . Mr. Owen's institution on the plan of which the school of Brewer's Green was established was intended merely for an asylum."¹

Poor man! If he could only persuade people to call the original and the first copy asylums, he might convince them that the second copy was not the third asylum but the original Infant School.

In 1834 a Select Committee of the House of Commons was appointed "to inquire into the present State of the Education of the People in England and Wales". On the 6th of August, Lord Chancellor Brougham appeared before it as witness. After pointing out that the National Society had followed the lead of the British and Foreign School Society, he continued: "I have observed the same disposition to follow our footsteps in other instances, as in that of Infant Schools, which were begun in 1818 by myself and a few friends . . . and they were afterwards taken up by the Established Church. I observe Mr. Wilson [the Rev. William Wilson], in speaking of his excellent Infant School at Walthamstow (the best anywhere to be seen), says his brother had previously established one in Spitalfields, and that he believed there had been another. No doubt there had, and his brother, having belonged to our original committee, had taken the plan of our first school, established in Brewer's Green, Westminster, the year before, and formed the admirable one in Quaker

¹ Pp. 67-69.

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Street. Ours was under J. Buchanan, whom we obtained from Mr. Robert Owen's great manufactory at New Lanark. Mr. Wilson's was under Mr. Wilderspin, whose very able works on the subject have been of great use in promoting these useful establishments ; but the first Infant School in this island—I believe, in the world—was the one at Brewer's Green ; R. Owen's and Mr. Fellenberg's,¹ which gave the idea, having both been formed in connection with an establishment, manufacturing or agricultural, and so necessarily confined in their application ; ours being everyday schools where the children are neither fed nor in any way helped, except by instruction and training."²

Wilderspin himself appeared before the Committee on the 18th of June, 1835. Asked "At what time was the first Infant School founded?" he answered, "Lord Brougham considers the first Infant School was founded in 1818. A mere assembling of young children is not an Infant School. I consider the first systematised school was commenced in the beginning of 1820." "When you speak of a school on a systematised plan, you mean that known by the name of Wilderspin's plan?"—"Yes ; I fancy myself the author of a plan for infant training. I think I was the first who gave a detailed account of the system in my book,

¹ Fellenberg had not then added an Infant School to his scheme. He obtained the idea of one from Robert Owen himself, who visited Hofwyl in 1818 and afterwards sent two of his sons to be educated there. Brougham's vanity in claiming that *he* established the first Infant School "in the world" is as amusing as Owen's and Wilderspin's.

² *Report*, 1834, p. 223.

and the first who practically proved its utility. . . .” “What was the origin of the Infant System?”—“I believe the origin was at Lanark ; at least, the idea of assembling a number of infants together to make them happy originated there.” “With Mr. Owen?”—“With Mr. Owen.” “And since that it has progressed very rapidly?”—“Yes ; but there was then no system to bring it to bear. It was merely assembling together a number of infants ; and, moreover, Mr. Owen himself visited me often and told me he thought it time enough to begin to teach a child to read when he was seven years old.”¹

Some two years later (in the autumn of 1837, if I have read aright the chaotic *Early Discipline*) Wilderspin and Owen met, but we have only the report of the first as to what occurred. He says : “During my stay in Liverpool . . . I lectured at Seal Street Police Station House, where Mr. Robert Owen, late of Lanark, attended for the purpose of entering into a controversy with me as to the invention of the Infant System, which, it seems, this gentleman took it into his head *he* had invented, because he had brought a parcel of the children of his workpeople together at his factory in New Lanark, in order that they might be out of their parents’ way while pursuing their avocations, but in which so-called Infant School there was not a single book, lesson, or apparatus of any kind for the promotion of any department of education, either mental, moral, or physical. The controversy, however, was overruled by our respective friends, and

¹ *Report*, 1835, pp. 13, 16.

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we ultimately agreed to have a private meeting, which accordingly took place at the house of Mr. Harvey, in the presence of some leading friends of both parties, and it was there mutually agreed that, whatever Mr. Owen had done at New Lanark or elsewhere in forwarding the all-important work of educating the people, for which the company present gave him full credit, I alone had the merit of inventing what is now known in this country by the name of the Infant System.”¹

The pretensions are now full blown, and the change of attitude towards Owen is complete. The man who in 1823 was “sincerely” thanked for visiting Spitalfields and approving the work, and “humbly” thanked for giving hints, is in 1837 only the man who brought together at a factory a “parcel” of his workpeople’s children, who aimed at nothing but making them happy, and who (perhaps to attain this end) had no books, lessons, or apparatus. The statement that there were no books, lessons, or apparatus in New Lanark or at Brewer’s Green is incorrect, but the fact that Wilderspin makes it serves to show what he considered the characteristic features of the Infant School after it had had the benefit of his “systematising”.

With Wilderspin’s account of the relations between him and Owen it will be interesting to contrast Owen’s: “While this [Westminster] school was thus so grossly mismanaged by Mrs. Buchanan and her husband . . . a person afterwards well known as William Wilderspin came

Owen and
Wilderspin

¹ *Early Discipline*, p. 331.

frequently to see James Buchanan and his wife and to see their operations in the school. The Society of Friends, hearing so much of the New Lanark Infant School from the public press, confirmed by their respected and known members, John Walker, Joseph Foster, and William Allen, became desirous of having one under their own immediate patronage ; and they erected a school in Spitalfields and appointed William Wilderspin to be the master of it. Being informed of this third school I went to see it, and on conversing with Wilderspin I learned he had been often to see the Westminster school. I told him that was a very inferior model to copy, and, finding him very desirous and willing to learn, and much more teachable than my first master, having much more talent and tact for the business, I gave him general and minute instruction how to act with the children, and to govern them without punishment by affection and undeviating kindness. He seemed fully to appreciate this attention to him, and requested I would come as often as I could to instruct him and give him the benefit of my experience. I did so, and had great pleasure in thus teaching him, finding that no part of my instruction was disregarded, but that what I recommended was faithfully followed. And he became an apt disciple of the spirit and practice of the system, so far as the outward and material mode was concerned. But as a first step towards forming a rational character for a rational system of society he had no powers of mind to comprehend it. [The meaning of this is that Wilderspin was a pious Christian.] And I did not

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attempt to advance his knowledge so as to unfit him to act under the patronage of his then supporters. When Wilderspin had attained such proficiency in managing the infants as his imperfect acquirements admitted, he published a work explanatory of what he had accomplished and recommended the system to the attention of the public. And in the first edition . . . he acknowledged his great obligation to me for my attention and the trouble I had taken to instruct him in a knowledge of the spirit and practice of the system. So far Wilderspin was honest and sincere . . . subsequent events . . . proved that he could not resist the temptations held out to him by the religious or those who professed to be so.”¹

When Owen wrote thus he was over eighty years old, and his memory played him tricks. Wilderspin’s name was not William, and the Quakers had nothing to do with the establishment of the school in Quaker Street,² but the rest of the account is highly credible and probably true.

“The Infant School in Quaker Street, Spitalfields, was opened July 24th, 1820, and 26 children
Quaker were admitted the first day; the next day,
Street 21; on the 31st, 65; and on the 7th of
School August, 38; at which last date” Wilderspin and his wife “were engaged by Joseph Wilson, Esq., to take the management of the concern.”³

¹ *Life of Robert Owen*, vol. i., p. 152.

² They had established a *British* school in Spitalfields.

³ *On the Importance of Teaching the Infant Children of the Poor*, p. 7.

Wilderspin's description of his experiences on that eventful August day, though often quoted, must be quoted once more :—

Wilderspin's first day

"Most of those who had been entered did not come at the time my labours commenced ; and we had, after much exertion, an entirely new brood. These came on the Monday morning, and as soon as the mothers had left the premises I attempted to engage the attention of their offspring. I shall never forget the effort. A few, who had been previously at a dame school, sat quietly ; but the rest, missing their parents, crowded about the door. One little fellow, finding he could not open it, set up a loud cry of 'Mammy! Mammy!' and in raising this *delightful* sound all the rest simultaneously joined. My wife, who, though reluctant at first, had determined on my accepting the situation to give me her utmost aid, tried with myself to calm the tumult ; but our efforts were utterly in vain. The paroxysm of sorrow increased instead of subsiding, and so intolerable did it become that she could endure it no longer, and left the room ; and at length, exhausted by effort, anxiety, and noise, I was compelled to follow her example, leaving my unfortunate pupils in one dense mass, crying, yelling, and kicking against the door !

"I will not attempt to describe my feelings ; but, ruminating on what I then considered egregious folly in supposing that any two persons could manage so large a number of infants, I was struck by the sight of a cap of my wife's, adorned with coloured ribbon, lying on the table ; and observing from the window

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a clothes-prop, it occurred that I might put the cap upon it, return to the school, and try the effect. The confusion when I entered was tremendous ; but on raising the pole surmounted by the cap all the children, to my great satisfaction, were instantly silent ; and when any hapless wight seemed disposed to renew the noise, a few shakes of the prop restored tranquillity, and, perhaps, produced a laugh. The same thing, however, will not do long. The charms of this *wonderful* instrument therefore soon vanished, and there would have been a sad relapse but for the marchings, gambols, and antics I found it necessary to adopt, and which, at last, brought the hour of twelve, to my greater joy than can easily be conceived.

“Revolving these circumstances, I felt that the memorable morning had not passed in vain. I had, in fact, found the clue. It was now evident that the senses of the children must be engaged ; that the great secret of training them was to descend to their level and become a child, and that the error had been to expect in infancy what is only the product of after years.”¹

The Spitalfields school attracted attention, and was visited by benevolent persons, some of whom **Waltham-**
stow set up copies of it in their own neighbourhoods. One person, though “repeatedly asked” to visit it, “as frequently refused”. This was the Rev. William Wilson, vicar of Walthamstow, and brother of the generous Joseph Wilson. He probably had

¹ *Early Discipline*, p. 3.

formed an unfavourable opinion of Wilderspin or of his methods, but his prejudice was at length overcome ; he examined the new machine at work, "his objections were removed," and he resolved to set one up at his own cost in his own parish.¹

The Walthamstow school soon became what Lord Brougham described it in 1834, "the best anywhere to be seen". The excellent results obtained by an unwilling convert proved a powerful argument for the system and incited to increased efforts for its propagation. On June 1st, 1824, a meeting was held in the Freemasons' Tavern. The Marquis of Lansdowne presided, and the speakers included Brougham, Wilberforce, John Smith, M.P., Edward Irving, Sir James Mackintosh, William Allen, Lord Calthorpe, the Marquis of Downshire, Dr. Lushington, and others. The first resolution affirmed "the many and great benefits, moral and political," which might "be expected to result from the general establishment throughout the United Kingdom . . . of Infant Schools on the plan of those already formed in Vincent Square, Westminster ; in Quaker Street, Spitalfields ; at Walthamstow, Bristol, and various other places". The second proposed the institution of an Infant School Society, whose main object should be the training of teachers at a central model school. The third asked for subscriptions and met with a ready response. Over £700 was collected in the meeting, the chairman, John Smith, and the *Morning Chronicle* contributing fifty guineas each, the two

**The Infant
School
Society**

¹ *Early Discipline*, p. 20.

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Wilsons £50 each, Brougham £25, and Macaulay and Robert Owen £10 each. The Marquis of Lansdowne was appointed president.¹

The first anniversary meeting was held on the 4th of June, 1825. The committee reported that the efforts to obtain a site for a central model school had been unavailing; that the schools at Spitalfields and Walthamstow had been used "for teaching the mechanical parts of the system to such masters and mistresses" as desired to be taught; that "Mr. Wilderspin, formerly master of the Spitalfields Infant School," had been employed "in different parts of the kingdom to open schools and to give practical instructions to the persons appointed to manage them"; that during the year thirty-four new schools had been opened, and that fourteen more were nearly ready for opening.²

How long the Society lasted I do not know. An advertisement at the end of William Wilson's *Advice to Instructors of Infants' Schools* shows that it was in existence in June, 1828, and Wilderspin's evidence before the Select Committee shows that it was extinct in 1835. Asked "Have you any Infant School Society?" he answered, "There was, but they had not nerve enough to withstand the prejudice which assailed them at first. They engaged me as their agent, and went on for a few years, and then told me they could not carry it on any longer; and since then I have gone on single-handed."³

¹ *Infant Education*, pp. 71 *et seqq.*

² *Early Discipline*, ed. 1840, pp. vi. *et seqq.*

³ *Report*, vol. ii., p. 32.

Though there is considerable doubt as to the date when Wilderspin began to work "single-handed," there can be none as to the zeal and value of his missionary labours. An Infant School exactly embodying his ideals would not be tolerated at the present day ; the mechanical appliances for the invention of which he claimed so much credit, and to the employment of which he attached so much importance, have been improved or superseded, but the immense benefit which he rendered in establishing Infant Schools in every part of the British Isles should never be forgotten.

Wilderspin's missionary journeys

At first he used to take children out with him to demonstrate his methods. "As their parents were very poor I provided them with suitable clothing. So entertaining was their infantile knowledge that . . . in some cases they were regarded as prodigies, and not unfrequently received presents to a considerable amount. This, however, was attended by many evils, and hence, though I kept them out for five or six months together, during which they were of great service, I relinquished the practice."¹

He resumed it, however, now and then, and we read of his taking classes in carts from Harden Grange to Keighly, by steamer from Glasgow to Greenock, and from Greenock to Rothesay, and by stage coach from Glasgow to Edinburgh. The visit to Scotland was undertaken at the invitation of David Stow in the spring of 1829,² and the account of it is the most interesting part of *Early Discipline*.

Early Discipline, p. 28.

²We learn the date from the *Life of Stow*.

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Describing the voyage down the Clyde, Wilderspin says: "When we had passed the other vessels, and the sun was rapidly increasing in power, the sailors prepared to put up an awning on the quarter-deck, and, as one of them was placing a bar at the side to fix it to, a little girl exclaimed, 'Oh, there's a perpendicular line!' A gentleman dressed in black, who I have since learned was a minister, overhearing this, went up to her and said, 'Lassie, what d'ye ken about perpendicular?' The child, putting her forefinger up straight, and looking at him full in the face, replied, 'Dinna ye ken that anything up straight like that is perpendicular?' 'Yes,' he rejoined, 'I ken that perfectly weel, but I want to ken where ye learnt it'; when she satisfied his curiosity by telling him that it was at the Infant School in the Drygate [Glasgow].

"Scarcely was this conversation ended, when, as the sailors were putting in the bent bar to support the awning from side to side, a little boy vociferated, 'Oh, there's a curved line!' The gentleman alluded to then asked what a curved line meant; when the child, bending his fore-finger and holding it up, said, 'That's it!' Attention was now generally attracted to the spot where they were, and the children pointed out the bars supporting the chimney or funnel as inclined lines. The former querist then asked if they could describe a triangle, when he was immediately told that it was a thing having three sides and three corners. Other forms were afterwards pointed out at his request, and after putting down in his pocket-book the various answers received, he wrote: 'I never

met with children of the same age, in any country, who understood so well what they had been taught'." ¹

When the Glasgow school had been open a month, a public display was given "in the Gaelic Chapel, in the west end of the city," presumably St. Columba's Church, Ingram Street, the site of the British Linen Company's Bank. Wilderspin says:—

"On entering the chapel, not less than a thousand of the most respectable and influential persons in Glasgow appeared to be assembled. Fronting the pulpit, a platform, with a number of raised seats, had been erected, so that the face of every child might be seen by the audience. The business of the day was opened by a sublime and impressive prayer presented by one of the clergymen of the city, during which the children were perfectly still. Having been seated, a small bell was rung, when every one instantly arose, and a little boy having given out a short hymn, written for the occasion, it was sung in good time and tune; and the effect of truths so important from voices so young was soon visible in the countenances of many of the audience.

"While the examination of the children as to form, size, and position was proceeding, one gentleman asked them the position of the pillars by which the gallery was supported, when there was a general exclamation of 'perpendicular!' After many similar questions, he inquired whether the chandelier before them was supported or suspended; to which they as promptly replied 'suspended!' To try them still further, he

¹ *Early Discipline*, p. 160.

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asked them to tell what difference there was between being suspended and supported; when a little boy took from his pocket a piece of string, at the end of which was a button: placing the button on the palm of his hand, he answered, 'That is supported'; and, holding the end of the string so as to let the button fall, he said, 'That is suspended'. The interrogator afterwards ascertained from them the shape of the chapel itself, and the forms of various parts of it, such as the pews, windows, and panes of glass; and at length he wished them to mention something not previously named which was perpendicular, when, after a short pause, a little black-eyed boy, whose head had been resting on his hand, as if his attention was abstracted from what was then occurring, shouted out, 'Ye're ane yersel'. The effect of this was so ludicrous that the composure of our friend was a little disturbed, but, soon rallying, he said, 'Suppose I were to strike Mr. Wilderspin, and knock him down, would he be perpendicular then?' To this the answer was immediate, 'No! he'd be ho-ri-zon-tal'." ¹

In 1839 Wilderspin received a Government appointment as Master of the Central Model School in Dublin. He held this till 1841, when he resigned, apparently on account of religious difficulties. On returning to England he fixed his home at Warrington,² whence he removed about 1848 to Wakefield. He had now been placed

Wilder-
spin's last
years

¹ *Early Discipline*, p. 129.

² In 1835, when he appeared before the Select Committee, he was living at Cheltenham.—*Report*, vol. ii., p. 26.

on the Civil List, and he lived to enjoy his pension till the 10th of March, 1866. More truly than most men he found the world an inn and death the journey's end. After all his wanderings he rests in the church of Thornes, a suburb of Wakefield.

The Walthamstow type, described clearly and concisely in the Rev. Wm. Wilson's *System of* **Wilderspin's type of Infant School:** *Infants' Education* (London, 1826), was more in harmony with modern ideas than the Spitalfields type, described neither clearly nor concisely in half a dozen works by Wilderspin, but his apostolic labours were so successful that his school was the model copied everywhere for twenty years or more.

Wilderspin retained two of the most characteristic features of the New Lanark School, the composition of the staff and the use of the playground as an educative agent.

In the rules which he drew up for adoption in the schools established by him it was pre- **i. The staff** scribed: "That the master take the intellectual and laborious part in the management of the children, and that, in all respects, he act the paternal part, similar to the father of a family, which consists in enforcing order and regularity, and seeing that the monitors do their duty; and, in fact, that the whole school works according to the principles of mental, moral, and physical development intended by the inventor of the system.

"That the mistress take the maternal part, and act the part of a mother, in following up the rules insisted

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upon and enforced by the master; in all things co-operating with him to bring the scholars under the same affectionate control, as would be found in a well-regulated family where the father and mother act in unison, and at the same time understand each other, so that one should not undo what the other does.”¹

Wilderspin advocated that an Infant School should have not less than fifty and not more than 200 pupils, and he maintained that a master and a mistress were sufficient for the maximum and not more than sufficient for the minimum number.

The playground was not a place of recreation or of physical exercise only, but a place of mental and moral training, and Wilderspin insisted that children should spend at least half the school time in it, always under the supervision of the master and mistress. To the *System for the Education of the Young* is prefixed a series of plates. The first represents the playground, and the accompanying description states that “there are two rotatory swings [giant strides], one for the boys, the other for the girls. The girls are represented vaulting over a rope. . . . The boys are represented swinging in the usual way without the vaulting rope. . . . Some of the children are represented as engaged in erecting their various buildings [with wooden ‘bricks’]; some are building solid oblong pillars, others are busy erecting squares, others pentagons, others hexagons, and so on as they may feel inclined. The playground is flagged. . . . The fruit trees are represented round the wall,

2. The playground

¹ *Education of the Young*, p. 39.

and, above all, it should be observed that the teachers are both represented as being with the children in the playground. This is absolutely essential to prevent accidents, to attend to the moral and physical training, and, above all, to see that the children acquire habits of honesty and kindness to each other. . . . There is not a single child in the plate represented as being idle ; they are all either doing or watching others doing, which is invariably the case, unless he is indisposed or asleep."

We have seen that some of the pretensions of Wilderspin to originality are untenable, ^{3.} The but he deserves all the credit that may ^{gallery} belong to the invention of the gallery which was, till recently, thought a necessary adjunct of all Infant Schools. Describing his early experiences, he says :—

"Another thing to be done was to prevent idleness which produced disorder ; and to provide constant occupation. Whatever children can *see* excites their interest, and this led to the idea of grouping them together, to receive what are called 'object lessons'. First, they were placed at the end of the room, but this was inconvenient ; parallel lines were then drawn in chalk across the room, and they sat down in order on these ; but, though the attention was arrested, the posture was unfavourable ; some pieces of cord were afterwards placed across to keep them in rank and file, but as this led to a see-sawing motion it was discontinued ; I then made various experiments with seats, but did not succeed, until, at length, the construction of a gallery, or succession of steps, the

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youngest occupying the lower, and the eldest the higher, answered the desired end.”¹

The writer of an article on “Schools for the Industrious Classes” in the second series of
4. The ball-frame Papers published by the Central Society of Education (London, 1838) says : “ We are willing to assume that Mr. Wilderspin has originated some improvements in the system of Infant School education ; but Mr. Wilderspin claims so much that many persons have been led to refuse him that degree of credit to which he is fairly entitled. For example, he claims a beneficial interest in an instrument called the Arithmeticon, of which he says he was the inventor. This instrument, which consists of a number of balls in a frame of wires, for teaching children to count, was described, in a work on Arithmetic, by Mr. Friend, published forty years ago. The instrument, however, is of much older date. It is the same, in principle, as the Abacus of the Romans, and, in its form, resembles as nearly as possible the Swan pan of the Chinese, of which there is a drawing in the *Encyclopædia Britannica*. Mr. Wilderspin merely invented the name.”²

The Arithmeticon is figured on page 188 of *Infant Education*. It differs from the familiar ball frame only in having instead of twelve beads on each of the twelve wires, one on the first, two on the second, three on the third, etc. The “Numeral Frame” figured in Wilson’s book has fourteen beads on each of twelve wires.

¹ *Early Discipline*, p. 5.

² P. 377.

The radical defect of Wilderspin's system was that he thought too much of "books, lessons, and apparatus". He confounded instruction with education, and attempted to teach more than should be taught in an Infant School. His evidence before the Select Committee states that on leaving the Infant School a child "ought to know the first four rules of Arithmetic and a good deal of the elements of Geography; it ought to know how to read well enough to read any book in simple language; it would have a tolerable knowledge of the quality of such things as immediately come under its notice; it would have a slight knowledge of the elements of Natural History, of the habits and manners of different animals, taught by pictures; it would have a tolerable knowledge of the leading facts of the New Testament, which are communicated by pictures in the same way; it would have a knowledge of form; the child would be able to distinguish a triangle from a square, and an octagon pillar from any other pillar".¹ This programme, extensive as it is, covers less ground than the scheme set forth in *A System for the Education of the Young*, where we have model lessons on Astronomy, Botany, Zoology, and a variety of subjects not mentioned in the evidence. These model lessons show that Wilderspin was far from understanding the true principles of object teaching. He spent his energies on words, not things. In the lessons on Botany, for instance, *monandria*, *diandria*, *triandria*,

¹ *Report*, vol. ii., p. 20.

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pentandria, *octandria*, *monogynia*, and *digynia* are only a few of the terms introduced.

Wilderspin informed the Select Committee "that the memory is not chiefly employed at the expense of the other faculties," but there is no doubt that the memory was too much employed, and on subjects which should have no place in the Time Table of an Infant School, such as tables of Money, Weights, and Measures. These were taught in the form of doggerel verse,¹ which was often highly amusing, as the following specimens will show :—

Twenty pence are one and eightpence,
That we can't afford to lose ;
Thirty pence are two and sixpence,
That will buy a pair of shoes. . . .
A hundred pence are eight and fourpence,
Which is taught in th' Infant School ;
Eightpence more make just nine shillings,
So we end this pretty rule.

Sixteen drams are just an ounce,
As you'll find at any shop ;
Sixteen ounces make a pound,
If you should want a mutton chop.

Twenty grains make a scruple—some scruple to take—
Though at times it is needful just for our health's sake.

Three feet's a yard as understood
By those possessed with sense and soul ;
Five feet and half will make a rood,
And also will a perch or pole.

¹ The doggerel was only adopted by Wilderspin. The genius who wrote it was " Mr. Carol, master of the Stratford Infant School ".

Forty such poles a furlong make,
 And eight such furlongs make a mile,
 O'er hedge, or ditch, or seas, or lake,
 O'er railing, fence, or gate, or stile. . . .
 But what's the girt of hell or heav'n ?
 (No natural thought or eye can see)
 To neither girt or length is giv'n,
 'Tis without space—Immensity.

Two pottles one gallon,
 Two gallons one peck fair,
 Four pecks one bushel heap or brim,
 Eight bushels one quarter are.
 If when you sell you give
 Good measure shaken down,
 Through motives good, you will receive
 An everlasting crown.

Two pints will make one quart,
 Four quarts one gallon strong :—
 Some drink but little, some too much—
 To drink too much is wrong.

A little wine within
 Oft cheers the mind that's sad,
 But too much brandy, rum, or gin
 No doubt is very bad.

Twenty-four hours will make a day,
 Too much time to spend in sleep,
 Too much time to spend in play,
 For seven days will end the week. . . .

Our time is short we often say ;
 Let us then improve it well,
 That eternally we may
 Live where happy angels dwell.

It is easy to find fault with Wilderspin and his system, but it cannot be denied that he rendered an important service to his country. The type of Infant School which he popularised

Estimate

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had palpable defects, but a defective Infant School is better than what was in his time the only alternative, no Infant School at all ; and when we consider the disadvantages under which Wilderspin laboured—his own imperfect education, his ignorance of the principles and of the history of teaching, and his lack of a settled income—we must feel surprise rather at the merits than at the faults of his system—at the comparative success rather than at the comparative failure of his missionary efforts.

DAVID STOW.¹

ALL the schools hitherto described sprang from the seed sown in New Lanark by Robert Owen, though Wilderspin had so modified the original plant as to produce almost a new variety. More than a new variety—a new species—grew from seed sown in Glasgow by David Stow.

Bio-
graphical
details

Stow, though Scotch by birth, was English by descent, his grandfather being a landed proprietor in the county of Durham, his father a prosperous and honoured merchant of Paisley. David was born on the 17th of May, 1793. When he had gone through the ordinary course of education in the grammar school of his native town he became "connected in 1811 with an extensively engaged commercial firm" in Glasgow.

Thoughtful and pious himself, fresh from a religious home and the tranquil respectability of the country, the youth was bound to see and hear in a great city many things to shock him, especially as the way between his lodgings and the counting-house lay through the Saltmarket, then the abode of "shameless profanity, indecency, and filth". His first impressions were deepened when he undertook to make

Vice in
Glasgow

¹ For a fuller account of the life of Stow see *Memoir*, by the Rev. William Fraser.

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inquiries for a charitable society which distributed funds among some of the aged men of the district. "During these investigations and private visits," he said, "an amount of deceit, ignorance, and wickedness was gradually disclosed which convinced me that the favourite idea of reforming the old was a hopeless one."

The alternative to reforming the old is forming the young. The impossibility of doing much might have prevented one more experienced or less enthusiastic from trying to do anything ; but Stow, in spite of sneers at his fanaticism and excessive zeal, resolved to do something. About 1816, therefore, he started a Sunday evening school. He began "by collecting at random the idle and the vagrant. . . . Each night brought different pupils from various quarters. . . . Their homes were widely scattered ; they in consequence, could not be easily visited, and the plan thus proved comparatively ineffective."

Seeing this, Stow decided to concentrate his efforts. Selecting two of the worst lanes in the Salt-market he drew his pupils from them alone. The area being so small, he could visit the whole of it twice a week ; "he soon knew the circumstances of every family, the names and disposition of every child" ; and want of proper clothing kept no one away, for the only eyes that would see the rags indoors were those that saw them daily out of doors.

The plan proved so successful that it was copied in other parts of the city, but it fell short of its author's

aspirations. One evening spent in the Sunday School could not overcome the influence of seven days and six evenings spent in the streets, and Stow became convinced of the "necessity of changing the street training into school training and of bringing the power of habit during the whole week to the side of religion," and, as the street training began almost as soon as the child could walk, the school training should begin just as early. He says: "'Prevention is better than cure' was our motto, and to begin well we cannot begin too early. My first object, therefore, was to begin with children under six years of age, before their intellectual and moral habits were fully formed, consequently when fewer obstacles were presented to the establishment of good ones."¹ Thus he and Owen, starting from different points, were led to the same practical conclusion by a common desire to reform the world.

This desire had hitherto cost Stow more labour than money, but the establishment and maintenance of day schools called for funds, which he could not provide without the help of the benevolent. Before he could obtain such help he had to overcome some of the open hostility and a good deal of the passive resistance which is always offered to new ideas. In 1826 he succeeded in forming the Glasgow Infant School Society; but the public was very slow to subscribe, and the first school had to be opened next year in a rented cottage. "This cottage consisted of two storeys at the head of a back garden entering

¹ *The Training System*, 7th ed., p. 27.

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through one of the front houses in Drygate Street. The garden was turned into a playground, and the under storey formed a dwelling-house for the teacher. . . . The upper floor was cleared out and a gallery was erected."

The opening of this school is an epoch in the history of education, for Stow, with little experience of teaching and no knowledge of pedagogy, had the courage to propound a new system, which he called the Training System. He laid great stress on the distinction between teaching and training. "*Teaching*," he says, "is not *training*. Moral *education* is not moral *training*. This distinction forms the very gist of our argument, intellectually as well as morally. Perhaps the most serious practical mistake that continues to be made in modern times is the confounding of two things essentially and inherently different—*teaching* and *training*. We hear from all quarters 'Train up a child,' but on explanation the process that is actually meant is *teach* or instruct, not train. The pupil is *told* by the master, but left to train himself in whatever way he may choose."¹

"The Bible says, 'Train up a child in the way he should go'. Train a child from its earliest years—from infancy till it is full-grown; and this ought to be done at all times and in all circumstances, personally when parents can, and by proxy when they cannot. It must not be the head of the child merely that is to be exercised or trained, but *the child*—the whole man—

¹ *The Training System*, 7th ed., p. 6.

if we are to hope for the fulfilment of the promise that 'when he is old he will not depart from it'." ¹

One great force which the assembling of children in a school enabled the trainer to bring to bear on the side of virtue was the "sympathy of numbers". This, says Stow, "is an influence mighty either for good or for evil. At present, with the young, it is all on the side of evil. To lay hold of this principle and turn it to good is the great desideratum. . . . Example indeed is more powerful than precept, but *sympathy* is more powerful than either, or both combined. And when example, precept, and sympathy combine, as in boys of the same age, an influence is in operation compared with which the example and precept of parents and guardians are rendered comparatively powerless. The power of the sympathy of numbers is felt every day in politics, in religion, and in vice. Our towns are the centres of political power, religion is apt to cool without numbers, and vice is most prolific in city lanes and the busy haunts of men. The same holds true in the training school gallery for intellectual and moral culture, and in the playground for moral development." ²

As one of the chief methods of instruction Stow prescribed the use of "picturing out". "Picturing This, he says, was "attained by the various out" processes, *viz.*, simultaneous and individual questions and answers, simultaneous and individual ellipses naturally mixed and arranged, analogy and *familiar* illustrations, and physical exercises by both master

¹ *The Training System*, 7th ed., p. 33.

² *Id.*, pp. 78-81 *passim*.

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and scholars, including the influence of the eye, tones of voice, etc.—the ‘sympathy of numbers’ being the oil-spring of the whole process”.¹ This definition is not very clear, but an illustration will throw light upon it. A local member of Parliament, visiting one of the schools, expressed himself satisfied that the Training System was worthy of attention, but added that he did not precisely understand the distinction between teaching and training. The “master-trainer” said that the children were then reading an account of the Israelites being forced to make bricks without straw. If he were to tell them why straw was necessary, that would be *teaching*; but if he were to make them tell him, that would be *training*. He therefore resorted to “picturing out”; he “brought out from them by analogy the difficulty of breaking a bunch of straw, however thin; what the effect would be of layers of straw in parallel lines being mixed with clay while yet in a soft state, and afterwards dried—that the straw would strengthen and render the bricks more tenacious, or at least less liable to break. He then brought out from the children that the bricks were not burned in Egypt, seeing, as they told him, that if so the straw used would have been of no service, as in the process of burning the bricks the straw must be reduced to ashes; that straw in this country would be of no use in the making of bricks, seeing that we *burned them* and that we could not get them sufficiently dried in ordinary seasons by the sun, even in the summer; all which the gallery of children readily told by the use

¹ *The Training System*, 11th ed., p. 180.

of ellipses mixed with questions. From the nature of the climate of Egypt . . . they inferred that the bricks might be dried in the sun—also that the clay could not be so firm or solid or tenacious as ours, when they required straw to strengthen it. They therefore thought that the clay in Egypt must be more sandy than ours, seeing that our brickmakers did not require straw to strengthen the bricks. Thus the mode of drying bricks in Egypt, and the nature of their clay compared with ours, was determined by analogy and familiar illustrations without *telling*.¹

Stow derived some hints respecting the management of a school from Lancaster and Bell; he derived more from Wilderspin.²

Stow and
Wilderspin

Stow and Wilderspin were agreed as to some of the means (the playground or "uncovered school," for instance, and the gallery), but they were not quite agreed as to the end, Stow's ideal pupil being an infant saint with some knowledge, and Wilderspin's an infant prodigy with some religion.

Notwithstanding Stow's own efforts, notwithstanding the interest aroused by Wilderspin's lectures, the public subscribed little, and the money for the maintenance of the Infant School came chiefly out of Stow's own pocket. From the same place came the money to establish a school for older pupils. But his self-denying labours

Train-
ing of
teachers

¹ *The Training System*, 11th ed., p. 322.

² When he had propounded his own system he visited Wilderspin in England, and in 1829 (as we have seen) he induced Wilderspin to give lectures in Scotland.

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at length began to tell, and in 1835 the Glasgow Educational Society (built on the ruins of the Glasgow Infant School Society) took over both schools, and resolved to establish a normal seminary. About 100 teachers had already studied the Training System at the schools; the seminary would offer future students better models and more thorough training.

The new buildings were opened in 1837, but a debt of over £10,000 greatly crippled the usefulness of the institution. Parliament had now begun making grants for education (especially for the education of teachers), and Stow, "finding further appeal to the Christian public useless," applied in 1842 to the Government for an immediate sum of £5,000 and an annual subsidy of £500. The application was allowed on condition that the institution be formally affiliated to the National Church. Stow, being a good Presbyterian, did not object, although if he could have looked into the future he must have objected strenuously. In 1843 the Disruption took place. Stow and every member of his staff but one were among the seceders, and it was soon made manifest to them that they could not be retained in the service of the establishment. The institution was carried on with the help of the English Wesleyans¹ till the Free Church resolved to adopt it. On the 8th of May, 1845, Stow and his staff, students, teachers, and children marched out of the old pre-

¹ They had for years been sending students to Glasgow for training as teachers, among others Mr. Sugden and Mr. Bailey, who were afterwards honoured members of the staff of the Wesleyan College in Westminster.

mises, to dwell under canvas while the still existing Free Church Training College was being built.

Over the fortunes of this institution Stow continued to watch till his death on the 6th of November, 1864, though he was far from satisfied **Effect of grants** with the new conditions which arose after the issue of the Minutes of 1846. He thought that the pupil teachers created by these Minutes could not be moral trainers ; that the grants given to schools for secular instruction tended to make such instruction the first consideration ; and that adding scholastic study to professional education in the Training Colleges was a mistake.

Stow deserves well of his country, but his claim to be remembered as a thinker rests rather upon **Estimate** his reassertion of old truths than upon his enunciation of new ones. He emphasised, he did not discover, the distinction between teaching and training, instruction and education, the cultivation of memory and the development of faculties, the acquisition of knowledge and the formation of habits, and, indeed, he had a tendency to over-emphasise it, for he tacitly assumed that the things were antagonistic as well as different. "Picturing out" is only another name for a device which skilful teachers had employed before he was born ; and the sympathy of numbers is a force which has been felt ever since people with a common interest or a common purpose began to assemble together.

THE LEAVEN OF PESTALOZZI.

IN a passage already quoted ¹ Wilderspin admitted Pestalozzi (almost boasted) that when he wrote his first book he was entirely ignorant of Pestalozzi. Beyond the fact that a man who sets up as a reformer ought to know what has been done or is being attempted by other reformers, Wilderspin's ignorance was not a reason for reproach. Pestalozzi had no special message for teachers of infants; because, though he believed in the training of infants of the most tender age, he believed it should be done by the mother; he had never established or advocated the establishment of an Infant School. The refugees of war who were committed to his charge at Stans in 1798 included some "infants," and the school at Clendy which towards the close of his long life he conducted for a few months consisted only of children under six, but he applied no special method to them. It is, therefore, curious that when his ideas were introduced to this country they should have been considered peculiarly applicable to the training of young children. The explanation is that Greaves and Mayo, our earliest exponents of these ideas, happened to be both interested in the promotion of Infant Schools, and that

¹ *Ante*, p. 44.

they saw in Infant Schools a means of propagating the methods of Pestalozzi, and in the methods of Pestalozzi a means of fertilising Infant Schools.

James Pierrepont Greaves, the son of a wealthy city man, was born at Merton, Surrey, in 1777. J. P. Of his doings from 1806 (when he gave up Greaves business, or rather when business gave him up) to 1817 little is recorded. The sum allowed him for winding up the affairs of the firm, and perhaps a little wreckage from the property, enabled him during that period to do without working. He lived in retirement, studying the writings of such mystics as Swedenborg and Jacob Boehme.

In the year 1815 a Mr. Synge, of Glanmore Castle, Wicklow, had joined the establishment at Yverdun. He wrote some account of it, which fell into the hands of Greaves, who says: "Having had strong internal visitations I retired from society, in order to abandon myself to the influence of the spirit of primitive love and to act entirely according to its precepts. . . . A little while after this voluntary retreat I learned of the work of the spirit in the person of the venerable Pestalozzi, and the deeds of this inspired man gave birth in me to an interest so powerful that I set out at once for Switzerland, where I remained for four years in holy companionship with him."¹

Greaves reached Yverdun about the end of 1817. He was cordially welcomed by Pestalozzi and lived with him in the closest intimacy. The Englishman

¹ These are not the exact words of Greaves, as I translate from a translation in Buisson's *Dictionnaire de Pédagogie*.

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could not speak, nor did he attempt to learn, either French or German, so Pestalozzi wrote for him a series of thirty-four letters on one aspect of his system. The first is dated October 1st, 1818, and the last, May 12th, 1819. They were translated into English by a Dr. Worms, edited by Greaves, and published in 1827 under the title *Pestalozzi on Infant Education*. The nature of Pestalozzi's views is indicated by the motto which the editor prefixed to the letters :—

Then why resign into a stranger's hand
A task as much within your own command,
That God and Nature and your feelings too
Seem with one voice to delegate to you [Mothers] ?

This is also shown by the title of an appeal which Pestalozzi published in English on the 14th of September, 1818,¹ about three years after his first relations with English-speaking investigators—"The address of Pestalozzi to the British public, soliciting them to aid by subscriptions his plan of preparing schoolmasters and schoolmistresses for the people, that mankind may in time receive the first principles of intellectual instruction *from their mothers*".

In the middle of July, 1819, the Rev. Dr. Mayo (of whom we shall hear more) arrived at Yverdun with some fifteen English pupils. The British section which was thus established was committed to the care of Greaves, Mayo, and a Rev. — Brown of Worcester College.

Greaves left Switzerland in the beginning of 1822,

¹ Probably *after* Robert Owen's visit to Yverdun in that year.

but he did not reach England till 1825. At the first annual meeting of the Infant School Society, held on the 4th of June of that year, the committee reported that "they had accepted the voluntary services of Mr. J. P.

**Greaves
Secretary
of the In-
fant School
Society**

Greaves, who has employed himself in explaining to many inquirers the process of infant education which this Society recommends and in communicating to them information respecting its plans and operations". The Society did not last long, but it lasted longer than his connection with it, as I have a circular of the Society, dated June 1st, 1828, signed "W. Potter, Secretary". Greaves was not the kind of man to hold a subordinate position or to work harmoniously with practical men. By his acquaintances he was regarded as "a moral phenomenon, as a unique specimen of human character, as a study, as a curiosity, as an absolute undefinable". Even his views on education were tinged with mysticism. He affirmed that "as being is before knowing and doing . . . education can never repair the defects of birth". Hence "the Divine existence" ought to be "developed and associated with man and woman prior to marriage". Ideas conveyed in such language must have been meaningless to most people. He tried to give them concrete expression in a school at Ham, in Surrey. He had a long correspondence with Bronson Alcott, the American transcendentalist, and was about to visit him when (in March, 1842) he was called upon to take a longer journey, to that undiscovered country from whose bourn no traveller returns.

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He had done little to promote the cause of sane education, but he must be named in any history of English Infant Schools, as he was one of the earliest apostles of the Pestalozzian faith in this country. It is a pity that he left his first love to waste his affections on a phantom.

His contemporary at Yverdun, though perhaps lacking some of those qualities which rendered **Dr. Mayo** Greaves a marvel to his friends, was abundantly endowed with that sterling common-sense which leads men to seek practical ends by practical means. Charles Mayo, the son of a London solicitor, was born in 1792. From Merchant Taylors School he passed to St. John's College, Oxford, where he had a brilliant career. He was elected Scholar of his College in 1810 and Laudian Fellow in 1813. He graduated in 1814, and in 1822 had the degree of D.C.L. conferred upon him by the University.

In August, 1817, he became headmaster of Bridgnorth Grammar School; in December of the same year he was ordained. Having, like Greaves, heard of Pestalozzi's work through Synge, he proceeded in July, 1819, to Yverdun, where he remained till April, 1822. This is the account given in the *Dictionary of National Biography*, by the Rev. C. H. Mayo, but Dr. Mayo's sister, Elizabeth, gives a slightly different account. She says that her brother "was persuaded by some friends, in the year 1818, to take charge of a party of English youths who were sent to Yverdun for education. Whilst he acted as their chaplain and was in some degree responsible to their parents for

their education, he took advantage of the opportunity to make himself acquainted with a system which was exciting the most widespread interest, and, in fact, remodelling education on the Continent. At first he saw but little to admire; there was much that did not at once commend it to an Englishman and a classical scholar. Its principles lay deep and were often obscured by the manner in which they were carried out. But gradually he perceived the beauty and value of the idea of the system and separated it from the form. . . . He caught the enthusiasm that reigned at the Institution, and hoped that by transplanting the system to his own country he might bestow upon it an invaluable boon. With this conviction . . . he returned to England determined . . . to give a practical exhibition of the system of Pestalozzi, modified, however, and adapted to the English mind and character.”¹

For this purpose, with the assistance of his sister (1793-1865), he opened a school for the upper classes at Epsom. This was so successful that the premises soon grew too small, and he removed to a larger house at the neighbouring village of Cheam, where fortune continued to smile on him till his death in 1846. So popular was the school that a boy had to wait years for his turn to be admitted, and a name sometimes appeared on Mayo's register of applicants almost as soon as it appeared on the register of baptisms.

Beyond the delivery of a lecture at the Royal Institution in 1826, Mayo appears to have limited his efforts

¹ *Pestalozzi and his Principles*, 3rd ed., p. 145.

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for the diffusion of Pestalozzi's principles to exhibiting the operation of them in his own school, till he made the acquaintance of John Stuckey Reynolds. Reynolds, born in Manchester in 1791, entered the Civil Service at the age of fourteen, and rapidly worked his way to the very highest positions. In 1835 **J. S. Reynolds** he performed a feat which in popular belief is impossible for a Civil servant—he broke down in health through “excessive application” and retired. During the next forty years those benevolent purposes, the pursuit of which had hitherto been the solace of his scant leisure, became the main business of his life. A visit to Ireland in 1823 had excited his sympathies for the cause of infant education. Thenceforward he found opportunities of establishing Infant Schools in various parts of London, and during his many official journeys up and down the country he stimulated their formation. When or how he met Dr. and Miss Mayo I cannot say, but their intercourse resulted in a common purpose to extend Pestalozzi's principles to the education of the poor. They rightly concluded that the most effective method would be the opening of an institution for the training of teachers in those principles, and in February, 1836, aided by other public-spirited men and women, they formed the **Home and Colonial Society** Home and Colonial Infant School Society. The College was opened on the 1st of June in Southampton Street, Holborn, but two years later it was removed to Gray's Inn Road.

The earliest of the now long series of annual reports was presented to a public meeting held in Hanover

Square Rooms on the 23rd of February, 1837. In this the committee, after speaking of the good work accomplished by the British and Foreign School Society and the National Society, proceeds: "Amidst this onward movement . . . it is matter of deep regret to those who have seen and duly appreciated the vast advantages of early education that Infant Schools have been so lamentably neglected". The committee therefore desired "to begin at the beginning, to purify, as it were, the flowing stream at its source—to lay hold of the rising generation and to provide them with an education essentially moral and religious up to the period of their entering into other schools or commencing a life of daily labour in our manufactories and fields". In doing this the committee was satisfied that it would "greatly shorten and render more effectual the work of all who have to do with the instruction of the poor during the subsequent period of their lives, and at the same time provide for the wants of a large proportion of the population, especially of the manufacturing population, who, engaged as they are from morning until evening, cannot after the age of seven obtain anything like the semblance of education".

The students were originally of both sexes. Single men were not refused, and married couples were particularly invited. The number of single men¹ trained

¹ I know a very aged schoolmaster now (January, 1904) living in honoured retirement who was one of those single men. As a proof of the fact that we have moved a little, he told me that when he resolved to become a teacher all his friends said to him: "Why, you have both arms, both legs, and both eyes, and are a strong and hearty young fellow; what on earth are *you* going to be a schoolmaster for?"

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was always small, and the eleventh report states that the supply of married couples was greatly diminished. Soon afterwards it ceased altogether, and mistresses only have been trained since.

Miss Mayo left her brother in 1834, and from 1843 her energies were concentrated on the work of the Society. For many years she presided at the criticism lessons, and generally supervised the professional training of the students.

The tenth report speaks of the death of Dr. Mayo. **Death of Dr. Mayo** "Important as his labours were to the cause of Christian education in general, to this institution they were peculiarly valuable. He attended its first meeting, was always ready to give his valuable advice and help," etc. Miss Mayo wrote a considerable number of text-books, but her brother only one. Indeed, he cannot, properly speaking, be said to have written one, for he simply delivered a lecture on Pestalozzi and a series of lectures to teachers, the substance of which was afterwards published by the Home and Colonial Society.

In 1843 the committee asked the Committee of **Government grants** Council to examine the institution. Seymour Tremenheere was accordingly sent, and, though his report occupies twenty-five pages of a Blue Book, it does not contain a single fact worth quoting here. His visit is mentioned only as a proof that the committee was considering the question of Government aid. When, by the issue of the famous Minutes of 1846, such aid was offered in the form of grants for the students trained, the committee resolved to accept it.

SOME DEFECTS OF THE EARLIER INFANT SCHOOLS.

THE voting of Government grants towards building and maintenance led to a considerable in-crease of elementary schools; and the labours of Wilderspin, of Stow, and of the Home and Colonial Society had so far influenced public opinion that when a school was established the younger children, if sufficient in number, were formed into a separate department. This was generally placed under the direction of a trained teacher and discharged satisfactorily what was then considered to be its function, but both before and after the first offer of State aid there were Infant Schools worth nothing because the teachers were incompetent, and others worth little because the teachers, though not incompetent, were mistaken in their aims or in their methods.

Some, for instance, might but for the larger classes and better discipline, pass for Sunday schools. At one of the earliest of the public meetings of the Home and Colonial Society, it was declared that no lesson should be given which had not a mediate or immediate reference to the Bible. "If the lesson should be on the subject of a flower, the children should be taught to remember every passage in Scrip-

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ture in which the word *flower* is mentioned ! They should be reminded that ‘Man cometh forth like a flower and is cut down,’ etc.”¹

That the method advocated was popular is proved by the large sale of the text-books embodying it. *The Infant Teachers’ Assistant*, by T. Bilby and R. B. Ridgway (which went through several editions), gives an alphabet beginning thus :—

A is an angel who praises the Lord ;
B is for Bible, God’s most holy word ;
C is for church, where the righteous resort ;
D is for devil, who wishes our hurt ;

and finishes thus :—

U is for Uzzah, who died for his sin ;
V is for Vashti, the hard-fated queen ;
W is for whale, to Jonah a dread ;
X is for cross upon which Jesus bled ;
Y is a yoke, ’tis the badge of a slave ;
Z is for Zaccheus whom Jesus did save.

The authors give the following instructions for using this alphabet :—

“ A child is to stand in the rostrum, having twenty-six squares of wood on which are painted the letters of the alphabet, great and small. The child then holding up the square on which the letters *A, a* are drawn calls aloud, ‘A stands for angel who praises the Lord,’ which the children, looking at the letter, repeat after him. He then holds up *B, b*, and so on

¹ *Schools for the Industrious Classes ; or the Present State of Education among the Working People of England*, 1837, p. 33. This was included in the second volume of the papers published by the Central Society of Education in 1838 (pp. 339-407).

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throughout the whole twenty-six squares. Thus the children become familiarised with the letters, and at the same time their little minds are stored with Scripture truths which, under the teaching of the Holy Spirit, may lead them to a knowledge of Him whom to know is life eternal."

The promoters of what may be called the Scriptural Infant School were right in thinking that every school should have an ethical aim, but they forgot that it should have other aims also, and they did not seem to know that religious knowledge is not synonymous with moral training, and that the ability to repeat the words of the Bible without understanding them is not even religious knowledge.

Both in schools where the instruction was wholly scriptural and in schools where it was partly secular there was too often a disposition to stimulate the infant prodigy. James R. Wood, who had spent four years investigating the condition of education in the large towns of Lancashire, was examined before a Select Committee of the House of Commons on the 11th of May, 1838. He was asked, "What do you consider to be the defect in the system of Infant Schools?" and answered, "One of the defects of the present system is the assembling so many children together and the constant appeal that is made to their emulation; it brings them out into publicity, and there are certain children who are brought prominently forward; of course the natural disposition of the teacher would induce him to put those who are apt and quick before the others, and

The
"Prodigy
System"

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these frequent exhibitions to strangers visiting the schools have all an injurious effect upon the mind of the child, and also an injurious effect upon the minds of other children, discouraging and disheartening them, and the great mass are generally of the latter kind".¹

Still Wood wished the schools to be improved, not abolished. "I do not conceive the system to be by any means perfect," he said, "but it is the best means I have met with or seen in operation for the education of the lower classes."²

**Schools
worth re-
taining** The anonymous author of the pamphlet already quoted agrees with both parts of the conclusion. He says : "Bad, however, as are most of the existing Infant Schools, enough has been done to shadow out the principles upon which they ought to be conducted, and to prove the practicability of a better system ; and, after all, there are but few Infant Schools that are not in advance of most of the common day schools. Some attention is paid to the cultivation of kindly feelings, and to the inculcation of moral principles, which in the higher class of schools are almost entirely neglected. Some success has also attended the attempt to blend instruction with amusement ; the confinement of school has been greatly diminished ; a child is allowed sufficient exercise for its health ; its understanding is sometimes appealed to instead of the memory ; and, on the whole, the time of a child is not, in the worst-conducted Infant School we have seen, so thoroughly wasted as in schools in which a boy is often made to spend the whole day in committing to memory page

¹ *Report*, p. 118.

² *Id.*, p. 119.

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after page of a Latin grammar of which he has not yet learned the meaning of a single word." ¹

About ten years after this was written Joseph Fletcher was directed by the Education Department to examine the Infant Schools **Fletcher's Report** conducted on the principles of the British and Foreign School Society. In his interesting and valuable report, comparing "the schools under teachers of earlier with those under teachers of more recent training," he finds very striking progress. The teachers of the older style were generally found in the older schools. To them must be allowed the merit of "having been among the first to explore this now well-trodden path of Christian duty," but little beyond this merit could be generally allowed them; nor was it surprising that desultory individual efforts should be outstripped by the combined exertions of gifted and faithful minds such as had co-operated to form and maintain the Home and Colonial Infant School Society.

"Previous and even subsequent to the date of its formation some of the promoters of Infant Schools appear to have considered them merely as asylums for healthful amusement under some degree of discipline and moral control—a purpose which is in no wise sacrificed in the more modern schools. Others seem to have thought that they presented opportunities likewise for mental development, and some processes of learning to read and 'count' were introduced from the plans of Bell and Lancaster, never calculated for infants; while others again . . . early made oral

¹ *Report*, p. 41.

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instruction from the Scriptures a part of their plan. This, though made so predominant as almost to supersede the purposes first contemplated, was yet carried out so crudely that I still see many traces of its having often and grievously failed, through employing scarcely any other faculty than the memory, and exercising it almost exclusively upon words without educating the infant mind to the remotest conception of their meaning. The most fatal error was, however, the leaven of intellectual display which, whatever the subjects for its exercise, appears to have crept into a good many of those establishments of earlier foundation. It seems to have produced in some of them . . . the 'prodigy system,' under which the quicker children were to be wonders of envy and admiration to the rest, and the whole school in which they were exhibited one of admiration, if not of envy, to its friends and neighbours on the occasion of each 'examination,' which might more truly have been designated a little drama in which the cleverer children had each their little part of representation by rote. Conceit, envy, and fretfulness, ill-restrained by fear, were the leading moral elements of such a system, and stultifying verbal repetition its chief intellectual exercise. 'Travesties of the language of science vied with desecrations of that of Scripture, and the world of truth was shut out by a veil of familiarity with its unvivified formulæ.'¹

The theory of all the more modern Infant Schools which Mr. Fletcher visited appeared to contemplate an

¹ *Minutes of the Committee of Council*, 1845, vol. ii., p. 217.

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education at once physical, intellectual, industrial, moral, and religious. To implant good habits of body, heart, and mind, which should grow with the growth and strengthen with the strength of the child, was the largest part of the work undertaken by the best Infant Schools. Mr. Fletcher proceeds to describe the routine of these, and his description is an interesting proof of the great progress which had been made since Wilderspin converted his wife's cap into a standard.

That progress continued to be maintained as the number of trained teachers increased, and the improvements suggested by experience were introduced. The best schools of 1875 were as superior to the best schools which came under the observation of Mr. Fletcher in 1845 as those in turn were superior to the dame schools. But even in 1875 the school for infants was too much a copy of the school for older children. Too much importance was attached to set lessons, and instruction was too often allowed to usurp the place of education. Within the next few years, however, a wonderful change occurred. There was a transformation not only of methods but of aims ; the Infant School became the children's garden, and when the devices of the Kindergarten were not expressly adopted, the spirit of its founder breathed upon the dry bones of formalism.

The best
schools in
1845

and in 1875

FRIEDRICH FROEBEL.

FRIEDRICH WILHELM AUGUST FROEBEL was born at Oberweissbach, a village in the Thuringian Forest, in the small Principality of Schwarzburg Rudolstadt, on the 21st of April, 1782, the fifth son of the chief pastor of the district. The childhood of the man who did so much to make the childhood of others bright and profitable was gloomy, if not unhappy. His mother died when he was nine months old, and his father devoted himself to the oversight of the temporal and spiritual affairs of his widely scattered parishioners with a stern conscientiousness that left no time or inclination for the oversight of the forlorn little parishioner under his own roof. Till the boy was four he was left to the charge of maid-servants who neglected him ; then he came under the charge of a step-mother, who would have added to his comfort if she had neglected him also.

The manse was shut in by the church in front, by buildings on both sides, and by a steep hill behind. **Love of Nature** "For a long time," he says, "I remained thus deprived of any distant view ; but above me I saw the sky clear and bright . . . and around me I felt the pure fresh breeze¹ stirring. The impres-

¹ Oberweissbach is 3,000 feet above the level of the sea.

sion which that clear sky and that pure air then made on me has remained ever since present to my mind. My perceptions were in this manner limited to only the nearest objects. Nature, with the world of plants and flowers, so far as I was able to see and understand her, early became an object of observation and reflection to me."¹ To Froebel's lonely and circumscribed childhood we may probably trace, besides his intimacy with plants and flowers, his delicate health, and that early habit of introspection which seems foreign to an ordinary robust boy.

Under his father's instruction he learnt reading so slowly that he was set down as a dunce and **First** packed off to the village girls' school. The **school** perfect neatness, quiet, intelligence, and order which reigned there had, he says, a remarkable influence on the development of his inner self. The text which the children were repeating in unison on the day of his admission ("Seek ye first the Kingdom of God and His righteousness, and all these things shall be added unto you") made such an impression upon him, that forty years later every word and every tone were still vivid in his mind. Froebel leaves us in doubt as to whether in this school he acquired a knowledge of any books except the Bible and the hymn-book, but he mentions his "unceasing self-contemplation, self-analysis, and self-education," and notes the great joy with which he proved to his own satisfaction that he "was not destined to go to hell".²

When he was nearly eleven years of age his

¹ *Autobiography* (Michaelis and Moore), p. 6.

² *Id.*, p. 11.

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mother's brother, Herr Hoffmann, who held a position of some eminence in the Church at Stadt-
Second of some eminence in the Church at Stadt-
school Ilm, came on a visit, noticed that his little nephew was surrounded by adverse influences, and took him to live with him. Nothing better could have happened to the boy. He exchanged the austerity of his father's house for the gentleness of his uncle's ; mistrust gave way to confidence, restraint to liberty. He was sent to the town school, and after a while grew strong and agile enough to join in the games of his comrades. Froebel enjoyed his uncle's sermons because they were pervaded by a beautiful charity. He enjoyed still more the religious instruction of his teacher, which, though too philosophical and abstruse for an ordinary child, was exactly suited to the needs of an extraordinary child with a natural love for the philosophical and the abstruse. In addition to religion, the subjects best taught in the school were Reading, Writing, and Arithmetic. Latin was miserably taught and miserably learned. In Physical Geography the tasks were merely parroted. The teaching, he says, "had not the very least connection with real life, nor had it any actuality for us, although . . . we could rightly name our little specks and patches of colour on the map. . . . As for actual instruction in German it was not to be thought of, but we received directions in letter-writing and in spelling. I do not know with what study the teaching of spelling was connected, but I think it was not connected with any ; it hovered in the air."¹

¹ *Autobiography*, p. 20.

Looking back on his school life, he reflects "how eminently injurious it is in education and in instruction to consider only a certain circle of future activities or a certain rank in life. The wearisome old-fashioned education *ad hoc* (that is, for some one special purpose) has always left many a noble power of man's nature unawakened."¹

Whatever the special purpose to which the education of Froebel had been directed it seems to have missed its aim, for he made several false starts before finding his true career.

**Froebel
becomes a
teacher**

He spent two years as a forester's apprentice; then he was allowed to go to the University of Jena, where he spent a year and a half in study, and nine weeks in prison for a debt of about five pounds. It was only after he had tried in succession being clerk, land surveyor, and private secretary that he found his life-work. In 1805 he had gone to Frankfort-on-the-Main to learn architecture when a schoolmaster friend said to him, "Give up architecture, it is not your vocation at all. Become a teacher. We want a teacher in our own school." Froebel accepted, and shortly afterwards wrote to his brother: "Even in the first hour my duties did not seem strange to me. It appeared to me as if I had been a teacher and was born to it. . . . It is plain to me now that I was really fitted for no other calling. . . . In the hours of instruction I feel myself as truly in my element as a fish in the water or a bird in the air."

Having become a teacher, Froebel remembered

¹ *Autobiography*, p. 23.

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reading of a teacher in Switzerland named Pestalozzi, whose views were exciting some attention, **At Yverdon** and he resolved to visit him. In the autumn of 1805, therefore, he spent a fortnight at Yverdon observing the methods there practised. He observed them with more interest than understanding, because his own notions of teaching were as yet only a memory of his school days, and because the system itself was not based on any complete and consistent principles. When Pestalozzi was asked to give an account of his ideas or intentions, he used to answer, "Go and look for yourself ["Very good," says Froebel, "for one who knew *how* to look, how to hear, and how to perceive"]; it works splendidly".

In 1808 he was back again at Yverdon for a long stay. In the July of the preceding year he **Private tutor** had undertaken the education of the three sons of a Frankfort gentleman, on two conditions—that they should live in the country, and that they should be handed over entirely to his care. He was already disgusted with the methods which he had seen followed in schools, though a long time was to elapse before he succeeded in bringing his own into orderly sequence and organic unity. At first the routine with his pupils "consisted in merely living, lounging and strolling in the open air, and going for walks"; and, as "from the circumstances of my own culture," he says, "I eagerly fostered to my utmost every budding sense for Nature that showed itself, there soon developed amongst them a life-encompassing, life-giving and life-raising enjoyment of natural objects. In the following

year this way of living was further enhanced by the father giving his sons a piece of meadow-land for a garden."¹ When winter rendered outdoor employments impossible, Froebel found occupation for himself and his pupils in "the easy art of impressing figures and forms by properly arranged simple strokes on smooth paper,"² which led to making forms out of paper itself, out of pasteboard, and, finally, out of wood. In spite, however, of all his thought and all his ingenuity, he concluded that his own lack of training unfitted him for the adequate training of others, and he obtained permission to take the boys to Yverdun.

They lodged close to the Institution and shared in its whole life. As on the previous occasion, **At Yverdun** Froebel saw much that was imperfect, but, **again** like every one else who came within the circle of Pestalozzi's influence, he was carried away by the prevailing vigour and enthusiasm. "Thus did the power and many-sidedness of the educational effort make up for deficiency in unity and comprehensiveness; and the love, the warmth, the stir of the whole, the human kindness and benevolence of it, replaced the want of clearness, depth, thoroughness, extent, perseverance, and steadiness."³ Struck with this want Froebel became a scholar in all subjects, and thus succeeded in constructing for the system what he convinced himself was a more complete and more consistent theory than Pestalozzi himself could formulate.

He was greatly pleased with "the boys' play, the whole series of games in the open air, and learned to

¹ *Autobiography*, p. 71.

² *Id.*, p. 75.

³ *Id.*, p. 79.

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recognise their mighty power to awaken and strengthen the intelligence and the soul as well as the **Play** body". He detected in them "the main-spring of the moral strength which animated the pupils and the young people in the Institution. . . . Closely akin to the games in their morally strengthening aspect were the walks, especially . . . when conducted by Pestalozzi himself. These walks were by no means always meant to be opportunities for drawing close to Nature, but Nature herself, though unsought, always drew the walkers close to her."¹

His summary Summing up his impressions, he says: "On the whole I passed a glorious time at Yverdon, elevated in tone, and critically decisive for my after life. At its close, however, I felt more clearly than ever the deficiency of inner unity and interdependence, as well as of outward comprehensiveness and thoroughness in the teaching there."²

He returned to Frankfort in 1810; and in 1811 he **Keilhau** entered himself at the University of Göttingen; in 1812 he removed to the University of Berlin, and in 1813 he answered his country's call for men to resist the invasion of Napoleon. His career as a soldier was bloodless, but it had an important effect upon the development of his system, because it gave him for messmates two divinity students, Heinrich Langethal and Wilhelm Middendorff, who had thought much about education. Around the camp fires they discussed his theories, and after the peace they joined him in putting these theories into

¹ *Autobiography*, p. 82.

² *Id.*, p. 83.

practice. In 1816 he had started at Griesheim "the Universal German Educational Institute," of which he was himself the only teacher, and his five nephews the only pupils. Next year the Institute was transferred to Keilhau; his two friends were added to the teaching staff, and the number of pupils increased. The many vicissitudes in its life, and Froebel's own multitudinous labours, wanderings, and difficulties between its establishment and the establishment of another Universal German Institute, the Universal German Kindergarten, must be passed over in silence.

As early as 1826 Froebel had pointed out in his great book, *The Education of Man*, the extreme importance of continuous development from one point. "It is highly pernicious to consider the stages of human development—infant, child, boy or girl, youth or maiden, man or woman, old man or matron—as really distinct, and not, as life shows them, as continuous in themselves in unbroken transitions; highly pernicious to consider the child or boy as something wholly different from the youth or man, and as something so distinct that the common foundation (human being) is seen but vaguely in the idea and word, and scarcely at all considered in life and for life."¹

Subsequent experience and reflection only deepened his conviction of the truth of this view. Continuous education was a necessary corollary of continuous development, and Froebel concluded that the most urgent practical

Con-
tinuous
develop-
ment

The first
Kinder-
garten

¹ *The Education of Man* (Hailmann), p. 27.

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reform was the establishment of schools for children younger than those admitted into the existing schools. In February, 1837, he opened his first in an old powder mill at Blankenburg.¹

His idea had obtained a local habitation, but it still wanted a name. At one time he thought of calling it the "Nursery School for Children" or "The Self-teaching Institution"; at another he inclined to a longer title, "The Institution for the culture of family life and for education towards national and individual life through the culture of the instinct for activity, enquiry and creation inherent in man—that is in the child—as a member of the family, of the nation, of mankind; that is to say, an Institution for the self-teaching, self-education, and self-culture of man by means of play, of creative original activity, and of voluntary self-instruction, for families and national schools".

Weighted with such a name the Institution could not make any progress, and Froebel still racked his brains for a better. "Middendorff and I² were one day walking to Blankenburg with him over the Steiger Pass. He kept on repeating, 'Oh! if I could only think of a suitable name for my youngest born'. Blankenburg lay at our feet, and he walked moodily towards it. Suddenly he stood still as if fettered fast to the spot, and his eyes assumed a

¹ Blankenburg is a village near Keilhau. The building is still used as a school, and a tablet on the front states "Friedrich Froebel established his first Kindergarten here on June 28th, 1840".

² Barop, a faithful fellow-worker, who married Froebel's niece.

wonderful, almost refulgent brilliancy. Then he shouted to the mountains, so that it echoed to the four winds of heaven, 'Eureka! I have it! Kindergarten shall be the name of the new Institution.'¹

The name was not purely fanciful. "As in a garden, under God's favour and by the care of a skilled, intelligent gardener, growing plants are cultivated in accordance with Nature's laws, so here, in our child-garden, our Kindergarten, shall the noblest of all growing things, men (that is children, the germs and shoots of humanity) be cultivated in accordance with the laws of their own being, of God, and of Nature."² The word was meant to indicate also that "the culture of Nature herself, especially the care of plants and flowers, must form part of the work".³

The Institution was solemnly christened on the 28th of June, 1840, when the 400th anniversary of Gutenberg's invention of printing was celebrated with much pomp and ceremony, but it never grew strong, and its languishing life came to an end in 1844. Froebel's own life came to an end on the 21st of June, 1852, the intervening period having been spent in attempting to popularise his opinions, and in training teachers to carry them out. His grave at Schweina is marked by a pedestal with the cube, the sphere,

Meaning
of the
name

¹ *Autobiography*, p. 137. "Perhaps we can hardly understand the pleasure he took in it unless we know its predecessor, Kleinkinderbeschäftigungsanstalt."—Quick, *Educational Reformers*, p. 394.

² *Froebel's Letters* (Michaelis and Moore), p. 161.

³ *Id.*, p. 164.

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and the cylinder of his second gift standing upon it, but

For his honoured bones
The labour of an age in piled stones

would be a needless monument. Every school throughout the world where infants are trained with care and skill to develop all the powers of their nature by self-activity is a living and abiding monument.

Though Froebel strove so persistently to obtain a clear and connected view of the principles underlying the educational systems of others, **"The Education of Man"** it is impossible to obtain from his writings a clear and connected view of the principles underlying his own system. The methods identified with his name were of slow growth, and as his published works cover a period of thirty years they exhibit not his matured opinions,¹ but every stage in their development. And they do not exhibit anything luminously; his meaning is obscured both by a bad style and by a constant tendency to symbolism.²

¹ His complete opinions are not set forth even in his complete works. He always hoped to be able to do for the later periods of childhood what he had already done for the earlier. For a full exposition of his system we are indebted to his disciples, who often differ among themselves and "read into" his words their own views. In Philadelphia I heard from a leading American apostle of the Kindergarten a lecture on the world-theory of Froebel which would have greatly astonished him.

² Such examples as the following might be amplified indefinitely:—

"The spherical is the symbol of diversity in unity and of unity in diversity." It is "the representation of diversity developed from the unity on which it depends, as well as the representation of the reference of all diversity to its unity". It is "the general and the par-

It would be as difficult to present skeletons of his books as to present skeletons of pearl oysters. One can only pick out a few of the pearls.

"In all things there lives and reigns an eternal law. . . . This all-controlling law is necessarily based on an all-pervading, energetic, living, self-conscious, and hence eternal Unity. . . . This Unity is God. . . . It is the destiny and life-work of all things to unfold their essence, hence their divine being, and therefore the Divine Unity itself."—*The Education of Man*, p. 1.

ticular, the universal and the individual, unity and individuality at the same time. It is infinite development and absolute limitation; it connects perfection and imperfection."—*Education of Man* (Hailmann), p. 169.

"The pure and perfect crystal, which represents, even in its outward form, the relative intensity in the different directions of the inner force, is formed when all the individual particles and all the individual points of the active force subject themselves to the higher law of a common requirement and of the integral representation of the law of formation, a higher law which, though it may hamper and fetter individual particles or points, yet yields the greater, perfectly formed product."—*Id.*, p. 171.

"The number five . . . appears in nature and among life-forms as uniting the character of the numbers two and three. . . . Hence, as developed under the influence of life-force, it is truly the number of analytic and synthetic life, representing reason, unceasing self-development, self-elevation."—*Id.*, p. 192.

"Collating such words as *fresh, free, frolic, freak, fruit, friend, fry*, and again, *flee, flight, flame, float, flow, flood, floor, flesh, fleet*, he finds in the first series the expression of spirituality manifested in a diversity of outward activities indicated by the sounds *fr*, and in the second series the expression of spirituality manifested in continuous inner activity indicated by the sounds *fl*. In both series the sound *f* would point to the spirituality, *r* and *l* being due to its different manifestations."—*Id.*, p. 216.

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"Education consists in leading man, as a thinking, intelligent being, growing into self-consciousness, to a pure and unsullied, conscious and free representation of the inner law of Divine Unity, and in teaching him ways and means thereto."—*The Education of Man*, p. 2.

"Education should lead and guide man to clearness concerning himself and in himself, to peace with Nature, and to unity with God; hence it should lift him to a knowledge of himself and of mankind, to a knowledge of God and of Nature, and to the pure and holy life to which such knowledge leads."—*Id.*, p. 5.

"Education in instruction and training . . . should necessarily be passive, following (only guarding and protecting) not prescriptive, categorical, interfering."—*Id.*, p. 7.

"We grant space and time to young plants and animals because we know that, in accordance with the laws that live in them, they will develop properly and grow well; young animals and plants are given rest, and arbitrary interference with their growth is avoided, because it is known that the opposite practice would disturb their pure unfolding and sound development; but the young human being is looked upon as a piece of wax, a lump of clay, which man can mould into what he pleases."—*Id.*, p. 8.

"All true education in training and instruction should therefore, at every moment, in every demand and regulation, be simultaneously double-sided—giving and taking, uniting and dividing, prescribing

and following, active and passive, positive yet giving scope, firm and yielding; and the pupil should be similarly conditioned: but between the two, between educator and pupil, between request and obedience, there should invisibly rule a third something, to which educator and pupil are equally subject. This third something is the right, the best, necessarily conditioned and expressed without arbitrariness in the circumstances. The calm recognition, the clear knowledge, and the serene, cheerful obedience to the rule of this third something is the particular feature that should be constantly and clearly manifest in the bearing and conduct of the educator and teacher, and often firmly and sternly emphasised by him. The child, the pupil, has a very keen feeling, a very clear apprehension, and rarely fails to distinguish whether what the educator, the teacher, or the father says or requests is personal or arbitrary, or whether it is expressed by him as a general law and necessity."—*The Education of Man*, p. 14.

"The child should, from the very time of his birth, be viewed in accordance with his nature, treated correctly, and given the free, all-sided use of his powers. By no means should the use of certain powers and members be enhanced at the expense of others, and these hindered in their development. . . . The child should learn early how to find in himself the centre and fulcrum of all his powers and members, to seek his support in this, and, resting therein, to move freely and be active, to grasp and hold with his own hands, to stand and walk on his own feet, to find and observe

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with his own eyes, to use his members symmetrically and equally."—*The Education of Man*, p. 21.

"The feeling of community, first uniting the child with mother, father, brothers and sisters, and resting on a higher spiritual unity, to which, later on, is added the unmistakable discovery that father, mother, brothers, sisters, human beings in general, feel and know themselves to be in community and unity with a higher principle—with humanity, with God—this feeling of community is the very first germ, the very first beginning of all true religious spirit, of all genuine yearning for unhindered unification with the Eternal, with God."—*Id.*, p. 25.

"The vigorous and complete development and cultivation of each successive stage depends on the vigorous, complete, and characteristic development of each and all preceding stages of life."—*Id.*, p. 28.

"The child, the boy, the man . . . should know no other endeavour but to be at every stage of development wholly what this stage calls for."—*Id.*, p. 30.

"The activity of the senses and limbs of the infant is the first germ, the first bodily activity, the bud, the first formative impulse ; play, building, modelling are the first tender blossoms of youth, and this is the period when man is to be prepared for future industry, diligence, and productive activity. Every child, boy, and youth should devote daily at least one or two hours to some serious activity in the production of some definite external piece of work. Lessons through and by work, through and from life, are by far the

most impressive and intelligible, and most continuously and intensely progressive, both in themselves and in their effect on the learner."—*The Education of Man*, p. 34.

"Play is the highest phase of child-development—of human development at this period; for it is self-active representation of the inner—representation of the inner from inner necessity and impulse."—*Id.*, p. 54.

"The word and the drawing are always mutually explanatory and complementary. . . . The drawing properly stands between the word and the thing, shares certain qualities with each of them, and is, therefore, so valuable in the development of the child. . . . The faculty of drawing is, therefore, as much innate in the child, in man, as is the faculty of speech, and demands its development and cultivation as imperatively as the latter; experience shows this clearly in the child's love for drawing, in the child's instinctive desire for drawing."—*Id.*, p. 79.

"The child—your child, ye fathers . . . follows you wherever you are, wherever you go, in whatever you do. Do not harshly repel him; show no impatience about his ever-recurring questions. . . . Do not, however, tell him in words much more than he could find himself without your words. . . . To have found one-fourth of the answer by his own effort is of more value and importance to the child than it is to half hear and half understand it in the words of another; for this causes mental indolence. Do not, therefore, always answer your children's questions at once and directly;

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but, as soon as they have gathered sufficient strength and experience, furnish them with the means to find the answers in the sphere of their own knowledge."—*The Education of Man*, p. 86.

"Fathers, parents . . . what we no longer possess—the all-quickening, creative power of child-life—let it again be translated from their life into ours.

"Let us learn from our children, let us give heed to the gentle admonitions of their life, to the silent demands of their minds.

"Let us live with our children, then will the life of our children¹ bring us peace and joy, then shall we begin to grow wise, to be wise."—*Id.*, p. 89.

"To give firmness to the will, to quicken it, and to make it pure, strong and enduring, in a life of pure humanity, is the chief concern, the main object in the guidance of the boy, in instruction, and the school."—*Id.*, p. 96.

"During the previous period of childhood the aim

¹ "This celebrated saying, '*Kommt, lasst uns unsern Kindern leben*,' is frequently translated, 'Come, let us live for our children'. *Unsern Kindern* is the dative case, and implies here, devotion *to*, absorption *in*, harmony *with* the life of our children. It seems to me that this is more fully expressed by the preposition *with*. *With* implies that both we and the children are equally active; *for* seems to place the burden on *us*, and renders the children passive recipients of our bounty."—*Hailmann's note*, p. 89.

"The dative here does not merely mean *to* or *for* our children, it means *with* them. What parents are there who do not live for their children by trying to leave them property, and, if possible, a name? That is not enough; and it is useless, or worse, if the parents cannot impart to them something better—a noble character."—Karl Froebel, *Explanation of the Kindergarten*, p. 1.

of play consisted simply in activity as such ; its aim lies now [during boyhood] in a definite, conscious purpose ; it seeks representation as such, or the thing to be represented in the activity."—*The Education of Man*, p. 112.

"These fairy tales and stories will . . . very clearly reveal to the observer what is going on in the innermost mind of the boy. . . . Whatever he feels in his heart, whatever lives in his soul, whatever he cannot express in his own words, he would fain have others express."—*Id.*, p. 117.

"How the serene happy boy of this age rejoices in song ! He feels, as it were, a new, true life in song."—*Id.*, p. 118.

Froebel insists that education is the joint work of the school and the home, and he indicates ten directions for this "unified school and family life". These are :—

**Common
means of
education**

(1) The arousing, strengthening, and cultivating of the religious sense. For this purpose we have the learning by heart of religious utterances concerning Nature and man and their relation to God, and particularly of utterances to be used in prayer.

(2) Consideration, knowledge, and cultivation of the body, to be developed in orderly graduated exercises.

(3) Observation and study of Nature and the external world, proceeding from the nearest surroundings to the more remote. [This involves walks and school journeys.]

(4) Learning by heart of short poems concerning Nature and life, especially of short poems that impart

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life to the objects of Nature in the nearest surroundings, and significance to the incidents of home-life.

(5) Exercises in language.

(6) Exercises in representation of outward forms, by means of paper, cardboard, wood-work, modelling, etc.

(7) Exercises in representation of outward forms by means of lines in squares.

(8) The study of colours, and the representation of them in prescribed outlines.

(9) Play or representations and exercises of all kinds in free activity.

(10) Narration of stories and legends, fables and fairy-tales, with reference to the incidents of the day, of the seasons, of life, etc.¹

The essence of Froebel's theory is that the development of man is continuous, and his education must therefore be continuous also ; and that the work of the educator is the promotion of the self-activity of the educated in every function of his being—body, mind, and spirit. For the complete training of infants according to this theory he devised a series of Gifts and Games.²

¹ *The Education of Man*, pp. 234-236 (condensed).

² A distinction is often made between *Gift* and *Occupation*, the sphere, for instance, being called a Gift, and clay modelling an Occupation, but the distinction is neither Froebelian nor necessary. Froebel called all the occupations *Plays*, and all the materials for occupations *Gifts*. Clay is therefore as much a Gift as the sphere, and the use which is made of the sphere is as much an Occupation as modelling. There are altogether twenty Gifts according to Froebel's general definition of the term, although the first six only are generally designated by this name.—Wiebe's *Paradise of Childhood* (ed. Bradley), p. 78.

The twenty Gifts are :—

(1) Six soft woollen balls of different colours—red, orange, yellow, green, blue, and violet.

(2) A sphere, a cube, and a cylinder made of wood.

(3) A large cube consisting of eight small cubes.

(4) A large cube divided into eight oblong “bricks”.

(5) A large cube, which, being divided into three parts in each dimension, produces twenty-seven smaller cubes.

(6) A large cube divided into twenty-seven oblong “bricks”. Six of the oblongs are cut in halves, forming twelve “bricks”; three are cut lengthways, forming six columns, making altogether thirty-six pieces.

(7) Five boxes of tablets made of wood and painted in different colours.

The first box contains squares.

The second box contains right-angled isosceles triangles.

The third box contains equilateral triangles.

The fourth box contains obtuse-angled isosceles triangles.

The fifth box contains scalene triangles.

(8) “Sticks.”

(9) Rings and half rings.

(10) Materials for drawing.

(11) Materials for perforating.

(12) Materials for embroidering.

(13) Materials for cutting paper and combining the pieces.

(14) Materials for braiding.

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(15) Laths (in America called "slats") for interlacing.

(16) The jointed lath.

(17) Materials for intertwining.

(18) Materials for paper-folding.

(19) Peas and wire.

(20) Materials for modelling.

Games constituted so important a part of Froebel's system that his nephew Karl gives *Play School* as the best English equivalent of *Mutter- und Kose-Lieder Kindergarten*. But the term *Games* as used by Froebel means much more than simple play ; it means play skilfully directed to the exercise of the limbs, to the expression of the emotions, to the strengthening of the character, and even to the imparting of knowledge. The games grew naturally out of the *Mutter- und Kose-Lieder* published in 1843. This, as the title indicates, is a book of songs intended for the use of mothers. Each song had a commentary in which the appropriate movements for the child were described, and its moral or educational significance was pointed out. In *Patsche-Kuchen*, for instance, the movements associated with the English Pat-a-cake are described, and we are told that the game " had its origin in an effort to make the impulsive movements of the infant the means of introducing him to a knowledge of the activities about him, and to their reciprocal relationships. The bread, or better still, the little cake which the child likes so much he receives from his mother ; the mother, in turn, receives it from the baker. So far so good. We have found

two links in the great chain of life and service. Let us beware, however, of making the child feel that these links complete the chain. The baker can bake no cake if the miller grinds no meal ; the miller can grind no meal if the farmer brings him no grain ; the farmer can bring no grain if his field yields no crop ; the field can yield no crop if the forces of Nature fail to work together to produce it ; the forces of Nature could not conspire together were it not for the all-wise and beneficent Power who incites and guides them to their predetermined ends.”¹

So far from attempting to supersede the mother in the education of the young, Froebel published his *Mutter- und Kose-Lieder* in order **Games** to make her work more intelligent and effective. Still, he maintained that, however intelligent and effective it might be, there was need for the Kindergarten. In the home a child does not mix with his equals. His parents stand on a higher plane, and, if he has brothers and sisters, they are either older or younger. At school he meets many children of his own age ; his intercourse with them develops the social feelings, compels him to practise self-restraint, and teaches him respect for the rights of others. The Kindergarten being a complement of his home, the action song which the child practises with his mother has its complement in the musical game which he plays with his fellows. Froebel invented several, and since his day the ingenuity of teachers has added largely to the number.

¹ Blow, *Mottoes and Commentaries of Froebel's Mother-Play*, p. 126.

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In this (as in every other department) continued progress is possible. What we need is, not to copy the details, but to apply the principles of the method. "The letter killeth, but the spirit giveth life." With the right spirit an Infant School may be a veritable children's garden, though Froebel might fail to recognise any appliance or device employed in it; without the right spirit the Kindergarten may be a prison, the gifts unwelcome, the occupations unprofitable, and the games irksome.

It must be admitted that the conditions are more favourable in the Kindergarten than in the Infant School. The Kindergartner has only to think of exercising the activity of her little pupils; the infants' teacher has to think also of imparting to hers a knowledge of Reading, Writing, and Arithmetic; and she is tempted to regard the gifts and games and songs as only pleasant interludes in the serious business of their young lives. She should, however, resist the temptation, and instead of raising impassable barriers between "Kindergarten" and "lessons" should strive to make the one help the other, the lessons giving directness to the methods of the Kindergarten, and the methods of the Kindergarten giving interest to the lessons. Thus, lessons in counting, in addition and in subtraction, may be combined with the first, the third, the fourth, the fifth, and the sixth Gifts; lessons in form and colour may be combined with the seventh Gift; the alphabet may be taught by means of the eighth and ninth, and writing by means of the tenth.

**Froebel's
spirit
should
permeate
Infant
Schools**

It is often assumed that Froebel's methods, though perhaps very useful with infants, are too **Transition** puerile for others. The assumption is only **from the** partly true. To employ the methods with- **Kinder-** out change might be foolish, but to employ other methods embodying the same principles would be eminently wise. Children who reckon themselves too old to handle cubes and balls and cylinders may yet be young enough to benefit by concrete teaching and by object lessons ; if they are too old to handle the later Gifts, they are young enough for the manual training to which these form an admirable preparation ; if they are too old for action songs they are young enough for lively music ; and if they are too old for the games of the schoolroom they are certainly not too old for the organised games of the playground. The transition from the mild climate of the Kindergarten or Infant School to the keener air above would be less severe than it now sometimes is if these facts were borne in mind ; if the teachers of the lower department were to think more of what their first class is just going to do, and the teachers of the higher department were to think more of what their last class has just been doing.

THE SPREAD OF THE KINDERGARTEN IN ENGLAND AND AMERICA.¹

THE Baroness Bertha von Marenholtz-Bülow says in her *Reminiscences of Friedrich Froebel* that in May, 1847, when she paid her usual visit to the Liebenstein Spa, she was told by her landlord of "an old man who had come a week or two before to the farm near by; who played and danced with the village children, and whom the villagers had nicknamed 'the old fool'." A few days later she met the man so described, a tall lean figure with long grey hair, at the head of a troop of children from the village, mostly barefoot and but scantily clothed, three to eight years old. These he led marching two and two, up a little hill, and there he set them to play, teaching them the song which belonged to the game." She was immediately interested, and till the death of Froebel in 1852, she spent several months of

¹ The best account I know of the spread of the Kindergarten in England is contained in a note by Michaelis and Moore to their edition of Froebel's *Letters on the Kindergarten* (pp. 201 *et seqq.*). For its spread in America see the life by Henry W. Blake prefixed to the Quarter Century Edition of Wiebe's *Paradise of Childhood*, and Miss Blow's monograph in *Education in the United States*, vol. i.; for its spread in other countries see Froebel's *Letters* and the Baroness von Bülow-Wendhausen's monograph in the *Report of the [U.S.] Commissioners of Education*, 1899-1900, vol. i., pp. 883 *et seqq.*

every year under his roof, learning his system and drawing inspiration from him. In 1853 her only child died and she resolved to consecrate the remainder of her life to the propagation of the master's ideas. By her innumerable missionary journeys, by her lectures, her correspondence and her books, she did more than any one else to extend and to popularise them throughout Western Europe.

In 1851 the Kindergarten had been entirely prohibited by the Prussian Minister of Education, and prohibited in Bavaria except when attached to the orthodox Protestant Churches. Till the prohibitions were withdrawn nothing could be done in Germany, and in 1854 the Baroness came to England. Comes to England

It is stated by some of the authorities that there was already a Kindergarten at Hampstead, but Mrs. Ronge affirms categorically that "in 1854 . . . only one English family, that of F. Hill, Esq. (brother of the celebrated Secretary of the Post Office), sent his children into the only Kindergarten school then existing in England, that conducted by us [Mr. and Mrs. Ronge] at 32, Tavistock Place".¹ The first English Kindergarten
In that year the Society of Arts held an Educational Exhibition in St. Martin's Hall. The Baroness sent Froebel's Gifts and Mrs. Ronge gave a lecture on their purpose and meaning. The attention thus excited was increased next year when Froebel's nephew, Heinrich Hoffmann, came to London, when the Baroness pub-

¹ *A Practical Account of the Kindergarten*, by J[ohann] and B[ertha] Ronge, Preface to the 2nd ed.

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lished *Woman's Educational Mission, being an explanation of Frederick Fröbel's System of Infant Gardens*,¹ and when Dickens published an explanatory laudatory article in *Household Words* (No 278, July 21st, 1855). A method so different from that practised by Squeers and from that praised by Gradgrind, a method for making children happy, could not fail to appeal irresistibly to the tender heart of Dickens, and he exercised the whole of his great influence on its behalf.

Mrs. Ronge having given up her establishment to
In Man- Miss Pretorius, who had arrived from
chester Nassau, settled in Manchester, where she lectured and taught with such success that Kindergartens were attached to two ladies' schools and the Manchester Kindergarten Association was founded.

In 1857 Miss Doreck came over from Würtemberg.
Other In 1866 she set up in Kildare Gardens,
workers London, whence she removed to Kensington Gardens Square. In 1861 Miss Eleonore Heerwart (who had been trained by Middendorff at Keilhau) was added to the zealous band of workers in Lancashire. In 1864 she proceeded to Belfast,

¹ This was translated by the Countess Krockow von Wickerode, and is, I believe, the first work on the system published in England. The Baroness von Bülow-Wendhausen says (*op. cit.*, p. 888) this was "the first article on the subject written in the English language," but she is wrong. The earliest account that I have seen in English is a pamphlet of twelve pages published at Dresden in 1854, entitled "A Connected Series of Playthings and Occupations for Early Childhood, by Frederic Froebel". From the title-page it would appear that Froebel was the author, but it is clear from the text that he was not. Besides, in 1854 he was dead.

and in 1866 she started a Kindergarten and school of her own in Dublin. In the same year as Miss Heerwart, the Baroness Adèle de Portugall arrived, and in 1874 Madame Emilie Michaelis.

For the first twenty years the effect of the propaganda was mainly felt in private schools for the wealthy, though it had been commended by one of the Inspectors of the Education Department as early as 1854.

System
com-
mended
by an
Inspector

In that year the Rev. M. Mitchell, Inspector of National Schools for the Eastern Counties, had visited the Exhibition and Mrs. Ronge's school, and in his General Report for that year, after condemning much of the work done in the ordinary Infant School, he says: "Having this experience of Infant Schools, and this sense of what they ought to be, it was with undisguised pleasure that I hailed the commencement of what I hope may prove to be a new era for our infant life—the introduction into this country of a plan successful in Saxony, which owes its origin to Herr Froebel, and was among the few novelties of the Educational Exhibition of last year. Herr Hoffmann brought with him his simple apparatus; and his own pleasing manner of displaying it ensured a success which its merits, great as they are, might not have been equal to secure. This system, though intellectual, is truly infantile; it treats the child as a child; encourages it to think for itself; teaches it, by childish toys and methods, gradually to develop in action or hieroglyphic writing its own idea, to tell its own story, and to listen to that of others. There is

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no use of hard names, no singing of 'perpendicular' or 'horizontal,' but whatever is said, and whatever is done, is totally and altogether such as belongs to a child. The grand feature of the system is 'occupation'. The child is taught little; it simply produces for itself. It has toys given to it of the simplest sort—straight bits of stick, or peas soaked in water. It is shown how to use them, and becomes an architect and an inventor. Churches, towers, houses, and mechanical adaptations swarm from the newly acquired power. Again, with cubes of wood, the ideas of the child take a more solid form; it learns the weight, number, and size of articles, adapts them to their places, and fits them together, weaves with strips of coloured paper webs of varied beauty and certain significances of form, pricks out patterns with a needle, and even cuts clay and models it, and tells some stories of its life, as the old Egyptians—those infants of an infant world—might have done thousands of years ago, stories which the parent loves to read. Combined with such occupations are songs and games, and downy beds of sweet repose. The chief improvement is that the child learns everything itself, that there is no forcing of its mind, that when tired it leaves off its labour, and, having rested awhile, returns to it with vigour, or proceeds to something else. All that is required is tact and patience in the teacher, the art of knowing when to speak and when to be silent, a pleasing person, a pleasing voice, and a great love of children. Enough has been said of this system to attract attention to it. To learn more the student

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must go often to visit an establishment thus conducted."¹

The London School Board was established in 1870. In February, 1871, a committee was appointed (with Professor Huxley as its chairman) to consider the curriculum to be adopted in the Board's schools. With regard to the Infant Schools the committee recommended the introduction of some exercises of hands and eyes such as are given by the Kindergarten system. In 1873 one of the Board's inspectors in his report of the Infant Schools says: "It is quite a treat to go into some of these schools and observe to how great an extent it is possible to make instruction pleasant, and how easy it is to gain the affections of children by a kind and patient manner. I prefer to see infants, especially the younger ones, engaged, not so much in learning to read and write and count, as in singing, marching, and Kindergarten work. The children eventually progress much more rapidly than when kept hard at their books and slates. . . . I should like to see Kindergarten exercises become a more prominent feature in Infants' Schools than at present. With few exceptions, infants' teachers regard Kindergarten rather as an ordinary subject, to be taught like Reading and Writing, than as a system which should underlie the whole fabric of infant education, and pervade, as far as possible, every lesson given to the children. There is a great want of suit-

Adopted
by the
London
School
Board

¹ *Minutes of the Committee of Council on Education*, 1854-55, p. 473.

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able apparatus for this purpose, which I hope to see shortly supplied.”¹

In 1874 the Board appointed Miss Bishop (who was succeeded after some little time by Miss Lyschinska) to lecture to the mistresses, and in the same year the Croydon School Board appointed Madame Michaelis. In the same year also the British and Foreign School Society established the model Kindergarten and Training School in connection with its college at Stockwell and invited Miss Heerwart to take charge of it. Henceforward the movement spread rapidly, so that in a few years most Infant Schools regularly employed Froebel's games and many were imbued with his spirit.

Probably the first reference to the Kindergarten in the United States was in a “Report to the Government of Connecticut on the International Exhibition of Educational Systems and Material at St. Martin's Hall, London, under the auspices of Prince Albert and the Society of Arts, Commerce, and Manufactures. By Henry Barnard, delegate from Connecticut by appointment of the General Assembly, 1854.” In his *American Journal of Education* for September, 1856, Dr. Barnard says that “one of the most interesting and instructive contributions” to the Exhibition was “the cheap and simple apparatus devised by Frederic Fröbel to be used in his system of Infant Garden training and instruction”. Pending the reception of the specimens and books which he had sent for in

¹ *The Work of the London School Board*, p. 102.

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order to write an article on the system he quoted a description of it from an English paper. The intended article does not appear to have been written, but in the *Journal* for March, 1858, there was a brief contribution on the subject from Dr. Hermann Wimmer of Dresden. Dr. Barnard continued his advocacy, and in 1868 and 1870, after he had become the first United States Commissioner of Education, he recommended that "the first or lowest school in a graded system for cities should cover the play period of a child's life," and that "the great formative period . . . in all that concerns habits of observation and early development should be subjected to the training of the Kindergarten".

But valuable as was Dr. Barnard's pioneer work the chief apostle of the Kindergarten in America was Miss Elizabeth Palmer Peabody.¹ In 1859 she was struck by the exceptional brightness of a little boy, and found on inquiry that he had been trained in a German Kindergarten. This set her studying the writings of Froebel, and next year she opened the first American Kindergarten at 15, Pinckney Street, Boston. Notwithstanding its extreme popularity, she says: "I discovered its radical deficiency by seeing that the results promised by Froebel as the fruit of his method did not accrue, but consequences that he deprecated. . . . Hence I went in 1867 to Europe to see the Kindergartens established and taught by

¹ She was born in 1804. A sister of hers married one of America's greatest authors, Nathaniel Hawthorne, and another married one of America's greatest educators, Horace Mann.

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Froebel himself and his carefully educated pupils, and I returned in 1868 zealous to abolish my own and all similar mistakes and establish the *real thing*.”¹

When Miss Peabody returned to her native country she found Mrs. Matilda H. Kriege (a personal friend of Froebel's) and her daughter at work. They were induced to take over the Boston Kindergarten, and Miss Peabody devoted herself to lecturing. The band of enthusiasts was gradually increased, and the work of educating the public, of opening Kindergartens, and of training teachers went on prosperously.

As in England the strength of the movement was first felt in the schools for the wealthy. Children being admitted to the public schools of America at six there was not the same need for Infant Schools as in England where children were admitted at three. But for lack of such schools children under six were in large towns exposed to the physical and moral dangers of the streets, and the Kindergarten offered kindly spirits a means of rescuing them from such dangers. In 1874 Mr. S. H. Hill, of Florence, Mass., gave the money for the establishment of the first “Charity Kindergarten”. Four years later Mrs. Quincy A. Shaw, of Boston, entered the field. She opened and maintained more than thirty Kindergartens in her own city, and her good example was copied in many other cities.

In 1873 it was the good fortune of St. Louis to possess two such enlightened and devoted workers

¹Letter to Dr. Barnard published in his *Kindergarten and Child Culture*.

as Miss Susan E. Blow (now—January, 1904—the leading American exponent of Froebel's ideas) and Dr. William T. Harris (now United States Commissioner of Education). Miss Blow offered to carry on without salary a Kindergarten and a training school for teachers; and Dr. Harris, as Superintendent of Schools, urged the adoption of the plan by the city. Both succeeded. Miss Blow gave a practical proof of the value of the Kindergarten, and Dr. Harris induced the Board to make Kindergartens an integral part of the school system of the city. Boston followed, taking over Mrs. Shaw's institutions, and now most progressive cities have their public Kindergartens.



PART II.

THEORY.

THE BEGINNINGS OF MENTAL LIFE.¹

AT birth the consciousness of the child is very dim and limited, entirely concerned with the most fundamental bodily processes—the “vegetative” functions. Mental life can only be inferred from expressive movements indicating comfort or discomfort. From these it appears that the child is vaguely sensitive to light and to the contact of air, water, and clothing, and vaguely conscious of the feelings arising from the condition of the digestive, circulatory, and respiratory organs. But nothing is distinguished or located; the movements made are mechanical or reflex, quite beyond the infant's control; and, in the absence of stimulus of the kind mentioned, the child simply sleeps.

This earliest stage is generally considered the life of pure sensation. In our dull “awareness” when just falling asleep, or in the dimly distinguished organic sensations for which we have no name, and to which we do not attend, we perhaps find in adult consciousness an approach to the infant's state. Yet this state of undifferentiated diffused feeling is the foundation of

¹ The student is assumed to have a general knowledge of the structure and functions of the nervous system and of the sense organs.

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all later experience. "The first sensation which the infant gets is for him the Universe," says Prof. James, though it is only "a dumb awakening to the consciousness of something there."¹ A study of the structure and growth of the nervous system shows that complex perceptions and developed movements are impossible in the infant, the mechanism by means of which they take place being still unfinished. And the state of immaturity of the infant's brain continues in the later years of childhood, when the sense centres are fully developed, those parts of the brain connected with the relations set up among impressions, the "association centres" and the fibres connecting them, expanding very slowly until adolescence.

The characteristic mental growth of infancy, then, is the perfecting by use of the sense organs (especially the eye and ear and the skin of the mobile and sensitive members), and the development of the sensory and motor nerves, the impressions conveyed to and from the brain serving to elaborate the centres of the sensory and motor areas. That the sensory nerves are at first somewhat dull is, as Compayré points out,² an advantage to the child, protecting him from too violent disturbance by the outside world. "The swaddling numbness of infancy," as Stevenson calls it, is Nature's provision against what might be an absolutely painful initiation into life.

¹ *Principles of Psychology*, vol. ii., p. 8.

² *The Intellectual and Moral Development of the Child* (International Education Series), p. 74.



According to Preyer, the strongly marked sensations of taste—sweet, sour, and bitter—are distinguished by the newly born, and the sense of smell also appears early—in the first few hours in some cases investigated ; that is, expressions indicating satisfaction and repulsion follow the stimulation of the tongue with sweet or bitter substances or the bringing of a strong smell close to the nostrils. But how much consciousness accompanies these movements is not clear ; they may be largely instinctive, implanted by the necessity for seeking or avoiding suitable or unsuitable food. At any rate, as Preyer says, “these portions [the nervous apparatus of taste—the “taste bulbs” of the tongue, sensory nerves and gustatory area of the brain] work rightly earlier than the other organs of sense”.¹ And smell so far as it is developed is closely connected with taste ; the smell of food rather than the smell of flowers is noticed, or the strongly perfumed flower is carried to the mouth. The two senses seem to act together in the infant as in the animal.

**Earliest
sense ex-
periences :**
1. Taste
and Smell

As a rule, neither sense reaches a high development in human beings, for, except in regard to food at the beginning of life, neither is so useful in distinguishing the qualities of things as to be seriously trained. The relative prominence of both senses in the child's early life seems to condemn the cruel custom of forcing upon him food from which he instinctively revolts. The widely-diffused organic discomfort

¹ *Infant Mind*, p. 3.

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aroused by taste or smell is sufficient indication that his repugnance is not merely caprice.

The new-born child is sensitive to touch, but is quite unable to localise the excitement. As

2. Touch the skin is the organ of touch, the sense experiences are widely diffused, but differ greatly in acuteness in different parts of the body. In the more sensitive parts of the skin the sensory nerve fibres end nearer the surface in the small papillæ (or elevations in the layer of tissue beneath the epidermis) which contain a special organ—the tactile corpuscle in the palm of the hand, or the end bulb in the lips. The sense of touch is keenest in the lips and tip of the tongue in the infant of a few weeks old, and thus he sucks what he can reach. Later the hand, on account of its greater range of movement, is used for feeling. "Touch" includes both pressure and contact, which is merely a lighter form of pressure, and may also cover the "temperature sense". As regards the last, the infant almost immediately shows susceptibility to heat and cold, responding to the one by general movements of relaxation; to the other by violent reflex movements, sneezing, etc. But with temperature as with pressure the child's discrimination seems very imperfect, and requires much practice and variation of stimulus before his vague apprehensions of something comfortable or uncomfortable can be called impressions of heat, cold, or pressure. Certain parts of the skin, the "pressure spots," are specially sensitive to pressure, *e.g.*, the back of the hand. There are also heat and cold spots mostly distinct though

sometimes overlapping, but in the nature of the case it is impossible to ascertain definitely how far these distinctions exist in the infant.

Closely connected with touch are the sensations arising from muscles and tendons in experiences of movement and resistance. The movement of the surfaces of the joints upon each other is also felt. These sensations, occurring along with those of touch, become very important as soon as the child begins to make movements of exploration.

3. The Muscular Sense

At birth the infant is practically blind. Being incapable of sensations of colour and form he does not distinguish objects. But as 4. Sight Preyer shows,¹ sensibility to light exists, for the iris contracts under its influence, showing that the sensory nerve (the optic nerve), the region of the mid-brain which receives the impression, and the motor nerve (the third nerve) which supplies the circular fibres contracting the iris—that is, the whole reflex tract—is already working. The eyes are closed on being exposed to bright light, and for the first two weeks the child seems to feel uneasiness in the light. “The second day the child likes darkness better than light; he does not open his eyes except when in darkness.”² By the third week the eyes seem to have become accustomed to light, and to take pleasure in it. As a rule, the child seems to be staring into space, but at six or eight weeks old he is obviously “taking

¹ *Infant Mind*, p. 7.

² Cuignet, *Annales d'oculistique*, quoted by Compayré, p. 100.

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notice," that is, fixing the eyes on some striking object. Darwin even holds that his son followed the lighted candle with his eyes on the ninth day, while Preyer's baby did the same on the twenty-third day. It is difficult to state to what extent the infant has sensations of colour in the first three weeks. Light sensations come first. At six or eight weeks bright colours, especially red, are noticed and apparently give pleasure. Baldwin's method of experimenting on his child's colour perception shows the only way in which any idea of the child's state can be gained. The various colours were placed within reach of the child, and those first selected were inferred to be distinguished first.¹ But in this case the baby was nine months old, and had considerable command over the limbs. In the earliest weeks we are dependent on what fixes the infant's gaze. And we are quite incapable of learning till much later whether the child will have the normal range of colour vision. The apparent preference for the "exciting" colours, reds and yellows, connected with the facts relating to the extent of the field of view, shows the very gradual development of the visual apparatus, including the retina. "The new-born child sees only in a straight line before him," says Compayré. The cause of this is partly the inability of the muscles to turn the eyes easily, partly the fact that the child cannot hold his head up, and partly, it would seem, the limitation of the retina's sensibility to the central zone. Again, even when the child begins to

¹ *Mental Development in the Child and the Race*, chap. iii.

notice objects, his range of vision is very short. Compayré puts it at about three yards in a child from fifteen to twenty days old.¹ This shows that the accommodation of the eye is different from what it will be later. Temporarily there is, so to speak, accommodation for near vision only, practically myopia, though in early childhood, up to five years, the opposite characteristic of far-sightedness is common. Hence the fine work sometimes done in Infant Schools (threading of small beads, pricking, weaving, etc.) is open to the objection of inducing short-sightedness again. From what has been said it is obvious that the infant of a few weeks can have only the most elementary power of distinguishing the contours of objects. Those in direct vision, within a few yards' range, and striking as to brightness and colour seem alone likely to make on the retina an impression approaching to definiteness. In the first weeks, also, the two eyes do not move together, the muscular mechanism of co-ordination not working properly. Thus the impressions made on the two retinas must be different, and the field of vision the more blurred. The effort to follow the movements of interesting people—the mother and the nurse—stimulates the child to constant practice; and, once the muscles work rightly together, satisfaction with the result helps to fix the new acquisition. At the same time the power of accommodation is increasing, and the impressions of the moving hand are being correlated

¹ *Development of the Child*, p. 104.

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with the visual sensations, helping out the apprehension of distance.

At birth the infant is deaf owing to the absence of air in the drum of the ear. After a few
5 Hearing hours there may be movements of reaction to loud sounds causing shock, but generally from two to four days are necessary before one can be sure that the child hears.¹ For several weeks sounds seem to come muffled to the child—an advantage, considering their exciting effect. But hearing appears to come to maturity much more rapidly than sight. From one month to six weeks the child learns to notice voices, shows pleasure in varying degrees at musical sounds, and is easily startled by unusual noises. The mother's voice is first recognised. As is familiar to every one, many children of two or three months show the strongest interest in singing or the playing of a piano. But sounds are very uncertainly located, as, indeed, in many cases, they continue to be throughout life unless special training is given. A sound is, of course, roughly located when the child turns towards it. Preyer's son did so in the twelfth week, Darwin's in the seven-teenth.

We have hitherto been surveying the materials of
Move- sensation, that is, the cognitive element of
ments mental life, or the impressions made upon
the centre of consciousness from without (the vague organic sensations, in a sense internal, are due to the effect of the organs of digestion, etc., on the nervous

¹ Preyer, *The Senses and the Will*, chap. ii.

system); but the mental circuit cannot be considered complete until the nervous current which came in from the sensory nerve to the brain has run out by a motor nerve, resulting in a movement. There is reason to believe that every incoming impression finds an outlet in some movement, and this is most easy to trace in young children.

At first the movements made, though generally the outcome of stimuli from without, or from the internal organs, are not conscious. The child is a mere automaton. Between the automatic state and that of movement directed by consciousness a series of regular advances can be traced.

Preyer mentions first the *Impulsive Movements*,¹ otherwise called automatic, spontaneous, or random. These precede sensation itself, being due to no external impression. Such are the widely diffused twitchings and stretchings of the infant, in which Bain and Compayré see the discharge of energy from the nerve cells liberated spontaneously and blindly in the first growth.²

Reflex Movements.—These are due to impressions conveyed to a centre in the spinal cord, the bulb, or even higher centres of the brain below the cortex. Movement follows instantaneously and at first quite without consciousness or control. Two main types of reflex action are distinguished by Stout, *Physiological Reflexes*, carrying on the fundamental bodily processes, and *Sensation Reflexes*,³ more limited and special move-

¹ *Infant Mind*, chap. iv. ² *Development of the Child*, p. 71.

³ *Manual of Psychology*, p. 126.

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ments, *e.g.*, sneezing, or closing the eyes before bright light. It seems probable that these soon come to be accompanied by faint consciousness, although beyond control. After six months the ability to control reflex processes begins to appear, showing the development of inhibitory nerves.

Instinctive Movements.—The transition from reflex to instinctive movements is almost imperceptible, the latter being characterised by a clearer purpose, by response to stimulus according to different circumstances, and by greater complexity. Sucking, grasping, and, by the age of three months, raising the head are among the first instinctive movements of infancy. Though not initiated by conscious design, they depend on pre-formed tendencies in the brain and nervous system resulting from hereditary experience.

By the various movements described the motor apparatus becomes more and more efficient. In those cases where the movement gives rise in its turn to a “kinæsthetic” sensation, we see the beginning of the process by which movements result from an impression on the cortex and become *willed*.

Although sensation with its correlative movement
Feeling (itself, so far as consciousness is concerned, merely a succession of complex sensations of sight, touch, etc.) is most definitely marked out, the elements of what will later be temperament also appear from the earliest stage of life; that is, *Feeling* in its simple constituents, pleasure and pain, can be observed. Feeling is an independent psychical fact, of which the cerebral conditions are as yet little under-

stood. According to Mr. Stout's view, pleasure arises in connection with the undisturbed and successful performance of function.¹ An impression received from without, or from the state of the organs, starts off the complex process of sensations and movements, and is accompanied by a special "feeling-tone" more or less pleasant till it reaches its culmination, when pleasure is keenest. Similarly, pain results from the thwarting of such a process. The facts of infant psychology seem to bear out this view. If at first all contact seems more painful than pleasant to the new-born child's unaccustomed nerves, after a few weeks, as Compayré shows, the exercise of all his senses, as well as the function of nutrition, seems to cause considerable pleasure.² In some cases the very keen pleasure connected with touch sensations can be remembered, and the baby's delight in movement is apparent to every one. Although the infant has as yet no character, from the first the close observer can trace individual differences of feeling or "affective" tendency. In some children there is a predominance of the exciting or pleasant feelings, in others of the depressing or painful feelings.

The element of feeling, combined with certain sensations, gives rise to the various emotions. The two earliest to show themselves, according to all observers, are fear and astonishment (which at first is closely allied to fear). Fear is most clearly an *instinctive* emotion, the result of

Early
emotions:
Fear

¹ *Manual of Psychology*, bk. ii., chap. viii.

² *Development of the Child*, p. 174.

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experience inherited from primitive ancestors. "Fear is one of the aspects of the human soul where we may expect to find reflections and reverberations of all the past ages of life in the world. . . . The past of man forever seems to linger in his present, and the child no less sums up and reflects past ages of fear and past fear experiences than he summarises physically the story of mankind."¹ The child is not afraid because he has reason to be, and "the intensity of many fears is out of all proportion to the exciting cause".² The things specially exciting fear in the first weeks are loud sounds ; a little later fear of falling, of strange faces, of strange rooms, etc., appears. Once the child begins to notice his surroundings he is easily startled by any unusual circumstance. In the second year one infant screamed violently at the sight of black hair—his own family being fair. Fear of fur when touched, of big eyes and teeth, are mentioned by Dr. G. Stanley Hall, who finds the source in heredity,³ though Compayré prefers to regard weakness and inexperience as the cause.⁴

Astonishment or surprise is not necessarily painful. **Astonishment** It may end in fear, but just as often it may end in pleasure. The fixity of the eyes and the open mouth show that the child is noticing his surroundings. The first look of surprise may appear at three weeks, but it is not till between three and six months that there are striking evidences.

¹ Chamberlain, *The Child*, p. 266.

² Hall, *American Journal of Psychology*, vol. viii.

³ *Loc. cit.*

⁴ *Development of the Child*, p. 184.

Anger is another emotion displayed very early, and may be considered the more active side of fear. Hence vigorous children exhibit it more frequently than weakly.

The old classification of temperaments into sanguine, choleric, melancholic, phlegmatic, though il-logical and based on a scientific error, is use-ful as a reminder of well-marked differences. Preyer points out that the sanguine and choleric types are alike readily excitable, but the after-effect is slight in the one and strong in the other ; while in the melancholic and phlegmatic types the excitability is small and the after-effect great and small respectively.¹ The sanguine type responds most readily to pleasant, and the melancholic to painful stimuli.

As feeling is closely connected with the organic sensations, there is the consequent possibility of regulating it to some extent in early life by careful attention to diet, fresh air, water, and exercise. Preyer advises that the phlegmatic child should have plenty of variety, which, however, is something of a danger to the sanguine or the choleric. Occasions for fear should be carefully avoided in the case of the melancholic type, which it is difficult to distinguish until later.

The results of this survey bring out several points of importance.

(1) Education begins from the very first, for the nervous system develops with use, and the increase in complexity in the structure of the

**Tempera-
ments**

**Practical
conclu-
sions**

¹ *Infant Mind*, p. 26.

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brain depends on the impressions brought to it from the sense organs.

(2) Since these organs, the nerves, and the brain, are in a state of immaturity, progress in their employment must be gradual; and carefully regulated stimuli only should be brought to bear on the child.

(3) Movement or activity is a prominent part of the infant's life; every impression on the senses results in some sort of movement. Thus there can be no "training of the senses" without scope for movement, and such training, as Froebel says, "should cautiously follow in all directions the slowly developing life of the child".

PERCEPTION.

WHEN the child "begins to notice" he is entering on a new phase of mental life, in which impressions are referred to external things with a certain independence of their own. Parts of the vaguely apprehended whole begin to stand out in varying degrees of distinctness from the background. Two main causes will account for this advance :—

How Perception arises out of Sensation

(1) Constantly repeated impressions, if sufficiently striking, leave an effect on the nervous system. At last this effect modifies the present impression, giving it a faint feeling of familiarity. The recurrence of a particular impression amidst varying circumstances no doubt helps to make it stand out in relative isolation and precision.¹ Thus the mother's face, voice, etc., are naturally soon distinguished.

(2) Whatever satisfies instinctive needs comes to stand out in the same way. Sought blindly for the first time, the object seems to be accompanied by the feeling that *this* is what was wanted.

It is obvious that these two causes are nearly the same. In both, the modification of the nervous system by previous experiences produces the feeling of

¹ Stout, *Analytic Psychology*, vol. ii, p. 11.

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familiarity attending the present impression, although in the second case the modification is a pre-formed tendency resulting from inherited experience. Animal instincts and their very definite means of gratification supply the best examples of the second.¹ With the kitten, the moving ball or mouse, with the young squirrel, the nut, excites on the first occasion the activity which leads to definite satisfaction. No doubt the satisfaction of an instinct makes its own impression so that in the end the object once snatched blindly raises anticipations which mean a much more developed form of recognition. And since it is not always satisfaction that results from the animal's attempt to gratify an instinct, unpleasant effects also leave their colouring, and the old and wary mouse avoids the toasted cheese in the trap which fatally tempts the inexperienced.

An advance in perception is made when in previous experience the impressions of one sense have been so indissolubly connected with those of another that a visual experience, for example, suggests the experiences of touch with which it has been habitually combined. Thus the ball of wool *looks* soft, the window pane smooth, the fire hot, the lump of sugar sweet, although in each case there is an element *not* immediately presented to the senses. The softness, smoothness, heat, and sweetness which seem part of the visual experience are simply revivals of past states in which touch, temperature, or taste was also affected. This is what

¹ Stout, *Manual of Psychology*, bk. iii., chap. i.

Mr. Stout calls *complication*. Impressions of sight, touch, and movement especially become bound up together in this way, and the immediate experience becomes richer and fuller.

A third stage in perception is reached when the revival of past experience is sufficiently full, definite, and independent to be called an image or idea. When the child recognises the portrait of his absent father, or looks for the opening into a box, or makes a chair serve as a railway-train, what he sees now calls up more or less clear images of his father, other boxes that opened, and the long moving vehicle so often pointed out to him. The presence of such independent, or, as they are often called, "free" images, gives to what is actually touched, seen, or heard, a fulness and meaning which can scarcely be separated from it. In one respect this is a great advantage ; we see with greater readiness what we are looking for or anticipating. On the other hand the presence of images is a fruitful source of illusions. The small child once startled by stories of mad dogs or bulls may see an enemy in a lively puppy or a staid cow.

Images or ideas have been spoken of as if they were simply revived percepts or sense impressions with a certain complexity and independence. Professor James holds that the same parts of the brain are in action in the case of ideas as in the case of sensations, the distinction being that the sensation is aroused from the sense organ *externally*, while the image is excited *internally*, from indirect connection it may be with

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centres receiving sensations ; in the former case the nervous current has an exciting power absent in the latter.¹ Thus images on this view differ only in intensity from the corresponding sense impressions, of which they are fainter copies.

According to another view, however, the sensations which, as Hume says, are characterised by "force and liveliness" differ from ideas in kind rather than in intensity. "The percept," says Mr. Stout, "has an aggressiveness which does not belong to the image."² And the two have a certain independence ; we can often speak one set of words and mentally pronounce a different set at the same time. Similarly the power of perception may exist without the capacity to form free images. These facts suggest that, although sensations and the corresponding ideas may belong to the same locality of the brain, the ideas represent a further growth, perhaps in the cells of a different layer of the cortex. The two processes may therefore be easily imagined as continuous, so that simple perception which involves a certain amount of reproduction is possible while the more advanced state in which distinct memory images occur has not been reached. The *fact* that a young child recognises or perceives objects before he forms definite ideas of them in their absence is explicable on either view. The presentation of objects, pictures, etc., in teaching infants is a tacit assumption either that the complete power of forming images is still wanting, or that perceptions

¹ James, *Principles of Psychology*, vol. ii., p. 74.

² Stout, *Manual of Psychology*, p. 402 ; *vide* also p. 413.

have not yet by frequent repetition made a sufficiently deep impression, so that indirect stimulation from within, *i.e.*, from the sensations aroused by our words, is not enough to excite a distinct image.

The way in which the child by means of touch and sight comes to perceive the size, shape and position of objects shows best the growth of distinct perception out of mere sensation in which there is scarcely any reference to an external object.

Perception
of Space :
1. By
Touch

Taking for granted at the outset that sensations from the first possess what Professor James calls a primitive "bigness," we find that *perception* of the different space relations consists in subdividing this original indefinite "spatiality" into clearly apprehended parts, which are measured off against one another and put together in various ways to form the field of Space containing objects known to us, and in connecting the spatial impressions given by touch and sight respectively.¹

Among the infant's movements those of the mobile hand soon become prominent. The child begins to feel everything within reach and, especially, to explore his own body. Now, on the surface of the body, as we have seen, there are great differences in sensitiveness, so that the child has many different feelings according to the part touched. But we need more than variations in sensitiveness to explain the fact that each point of the skin seems to have its peculiar *feel*—that a touch on the back of one hand,

¹ Vide James, *Principles of Psychology*, vol. ii., chap. xx. (beginning).

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for instance, feels different from a touch on the other. The theory of "local signs" gives to *every* spot a special difference of sensation, according to its place. Psychologists have based this theory on the consciously felt differences of sensation resulting from the variations in the structure of the skin and what lies below it. Others regard the "local sign" rather as the relation of any *particular* sensation to the larger whole; or, in some cases, as the tendency of every stimulated point to suggest the movement of the hand, or rather finger, to it. The importance of the theory of "local signs," however, is that it explains how the undefined "bigness" of the limb which the infant may be exploring gets discriminated as different in different places. We must remember that at any moment the *whole* body is vaguely felt, and the special sensation of touch

Passive in relation to it, as part of a wider whole.
and Active But we have also to consider the sensations
Touch of the exploring hand; those of the limb are passive; the hand, besides having contact sensations, has the kinæsthetic or movement sensations aroused in the joints, etc. The combination of these has been called "active touch". Thus, wherever the child moves his hand along his own body, he has the double sensation of active and passive touch, and the connection, through constant experiment, becomes so close that the one immediately suggests the other. A touch on the leg calls up the whole series of double impressions gained in previous explorations. Or, again, the baby has a vague apprehension of the bigness of his hand in the sensation arising from its being

dipped in water ; a much more definite impression of size is gained when the mother traces the outline of each finger successively in the "Piggy went to Market" game, for here the "local signs" are stimulated separately, and each spot touched tingles with its special vividness, the effect lingering on when the next point is reached, while the points in advance faintly anticipate their stimulation (owing to former experiences). A series of impressions of this kind is necessary to bring clearly to consciousness an object with definite boundaries.

It is obvious, however, that the child's own active movements of exploration are of most importance in the mapping out of the body. They are constantly going on ; they apparently give much pleasure, and above all they combine active and passive touch impressions in a way which gives a peculiar interest to these movements. As the child feels his own hand or foot, for example, the series of passive impressions just described is accentuated by the accompanying sensations of touch and movement in the exploring fingers. The importance of movements in the perception of shape is apparent as soon as we reflect on our groping movements in the dark ; though here also the close connection between touch and movement, so that one suggests the other, is easy to see. A mere touch on some well-known surface—book, table, etc.—means all that movements of exploration could teach us.

Again, perception of position implies the reference of an impression to its general region—of a particular

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pain, for example, to the region of the lungs with whose general state of feeling we are more or less familiar from the breathing movements. More definite positions on the surface of the body come into notice owing to the constant tracing of lines, by the hand originally, from point to point, to the extremities. The characteristic positions on his own body up and down, right and left, back and front, are certainly different in sensation to the child; they *feel* different, but their clear distinction depends on movements. So we find in Froebel's advice to mothers suggestions on practising the child in the actions which impress these distinctions of position. The curious difficulty sometimes experienced, on awaking suddenly in the dark, of grasping the relative position of different parts of one's body, illustrates the use of movement in the case: it is not until various incoherent motions have been made that the feeling of which side is *right*, which way is *up*, etc., comes into consciousness. Similarly most young children find it difficult to distinguish between the right and left hands, though of course this is largely a matter of naming; yet the feeling of difference comes out best when the child begins to make some familiar movement associated for him with the right hand.

By exploration, then, the child comes to a fairly clear perception of the size, shape, etc., of his own body. Other things also being touched give only the *active* series which, however, suggests the passive experience of the resting hand. And simple move-

ment as when the hand or foot swings in the air without either active or passive series of touches gives some impression of empty space. The way in which from being a comparatively simple and passive part of the body a member may become differentiated and exploratory is illustrated in the case of the foot ; a day's climbing and wading barefoot brings out remarkably distinctions of position, etc., never realised before in the member itself, which at the same time supplies by its touch sensations, suggestive of movements, information as to the contour, size, position of rocks, branches, or pools, all the more striking because it is not commonly bound up with visual impressions, as in the tactual information gained from the hand.

In considering the way in which the size and shape of objects are perceived by the sense of touch, we must remember that, except in the case of the blind, the eye is, or rather becomes, of chief importance in perceiving the spatial relations of objects. Its capacity for distinguishing differences, the distance from which it can be affected, its mobility and rapidity of adjustment and its wide range give it the chief part to play in perception.

Just as in the case of touch, the stimulation of the retina by rays of light from objects gives rise to sensations characterised by a certain undefined bigness. Again each point of the retina has its own "local sign" in the reflex tendency to turn the eye so that the impression may fall on the fovea or point of greatest sensibility. The passive experiences of the

**2. Spatial
Perception
by Sight**

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resting eye are associated with those constant movements which bring first one part of the field of view and then another into distinct vision ; and both help to define the boundaries of objects.

Visual perception is modified by the fact that the two eyes act together and also by the close connection of visual and tactual experiences.

When we look directly at an object, perceived as
Co-ordination single by touch, the rays from it fall upon geometrically similar points in the two retinas. The two pictures seem to be superposed so that we see one object only, as if with one eye situated in the middle of the forehead. So constantly does this happen that when, as in stereoscopic pictures, each retina is impressed by a different image the correspondence makes us infer a single object. The point in direct vision, and the points in a limited area, above, below, right and left, are seen single. Beyond this area, and in front of or behind the point of fixation, objects are seen blurred and indistinct, or double images appear owing to the fact that the impression has fallen on two geometrically dissimilar regions of the retinas. Now in order to get the clear single image of direct vision the two eyes must work together. If the object to be examined is very near the eyes converge greatly ; for longer distances the convergence is less and less till at infinite distance, as when looking at a star, the direction of the eyes is parallel. In these movements of convergence, more or less felt, the object is always to bring the impression from the point of interest directly upon the fovea of each retina.

The co-ordination of the two eyes requires the efficient working of the muscles controlling the ocular movements. Constant practice brings this about; one object after another at varying distances in the field of view is brought into direct vision and therefore seen distinctly. But it should be remembered that although young children are able to make the movements of co-ordination, and to fix points at all distances, they do not necessarily explore the field of view to any great extent. As Stevenson observes: "Children, for instance, are able enough to see, but they have no great faculty for looking; they do not use their eyes for the pleasure of using them, but for by-ends of their own; and the things I call to mind seeing most vividly were not beautiful in themselves, but merely interesting or enviable to me as I thought they might be turned to practical account in play".¹

This suggests the intimate association of tactual and visual perceptions. The child looks most closely at the things he handles, and those which he may "look at but not touch" are a constant source of trouble. All the time the hand is making its explorations it is guided by the eye, if not in the very first months at any rate in the first year and onwards. The touch impressions give a force and *reality* to those of sight. As Mr. Stout shows, the *real* size of an object of which the visual perception varies so constantly is that learned in manipulation.²

**Touch and
Sight
combined**

¹ *Virginibus Puerisque*, Essay on "Child's Play".

² *Manual of Psychology*, p. 327.

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Perception by touch except in the blind is not very delicately developed as a rule, simply because it is so regularly helped out by sight. Indeed, simple contact with an object in the dark often suggests at once the corresponding visual image rather than further movements of exploration.

The familiar theory first put forth by Bishop Berkeley, that the eye does not itself perceive distance from the body but *interprets* certain visual signs by memories of movements towards what is seen, gives great importance to the impressions of touch and movement as educating the eye which would otherwise see its whole field as a flat surface. Doubtless the child's first experiments in grasping and walking give him notions of relative distance which become associated indissolubly with his visual experiences. But on a closer examination of the latter we find that the eyes themselves have the power of perceiving depth or distance, enabling us to *see* objects as solid, as well as to distinguish those near and far. When we fix our eyes on a near object those beyond are indistinct because impressions from them fall upon disparate parts of the retinas, on the two nasal halves ; the indistinctness or blurred character which gives us the feeling of distance becomes double images if carefully attended to, while the eyes remain fixed on the near point. Similarly when the distant point is in direct vision the intervening objects are blurred. When we see a box as solid the surface directly looked at affects corresponding parts of the retinas ; but the rest of the box is seen by the right

and left eyes from slightly different points of view, so that disparate parts are also affected, and the remote edge of the box is perceived as at some distance.

But the capacity to distinguish distance by the eye, though present in the child's case, is not at first of great value because not practically understood. The complex touch sensations of the hand in exploring surfaces, edges, and corners coalesce with the visual impression of solidity. The movements made to reach objects impress on the child differences of appearance which mean distance.

**Perception
of Distance
helped out
by Touch
and Move-
ment**

In bringing to clear consciousness the various spatial relations it is obvious that education must endeavour to cultivate sight and touch together. The impressions of sight alone are fluctuating, and, owing to the possibilities of the whole field of view, it is difficult to tell what exactly *has* been distinctly perceived by sight. But the impressions of touch have an insistence which compels attention. Quickness and exactitude of eye are best secured by giving a motive to their exercise as guiding manipulation of materials and successful movements in games; hence the advantage which the Kindergarten system possesses over the too common habit of trying to give clear impressions of objects to young children who are sitting perfectly still with their hands behind.

The very interesting question of how the child learns by degrees to distinguish colours illustrates very simply the characteristics of perception. A few observations on the youngest children in

Colour

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the Infant School show the gradual way in which the colours come to stand out from one another and to be recognised. In a few cases one will find children **Colour-Blindness** who are "colour-blind" owing to retinal deficiency. Total colour-blindness means seeing the whole field of view in monochrome, distinctions of bright and dark alone being recognised ; more common is the "red-green colour-blindness," in which red and green are not distinguished from each other—the child "matches" a dark red with a dark green, a light red with a light green. Occasionally the defect is in the yellow-blue pair of complementary colours. But this is rare, and where the deficiency in actual sensation is absent, children, in spite of early doubtfulness, may learn to distinguish all the colours with great accuracy. Preyer's experiments with his son to discover the order in which colours became distinguished involved the correct *naming* of the colours.¹ But as the distinction may be clear enough though the name is forgotten it is simpler to ask the youngest children to *match* brightly coloured wools or chalks. Of course a very young child may not understand what one wishes him to do, or may seize the wrong colour just because it pleases him better. Baldwin's experiments, in which the baby reached out for the coloured papers which struck her most, did not involve this possible source of misunderstanding. As we have seen, red and yellow, the exciting colours, seem to be first distinguished clearly. Of four children, two just over, and two just under three years

¹ *Senses and the Will*, chap. i.

old, three immediately chose yellow as the "prettiest colour," and one red. The secondary colour, orange, intervening between the two is, of course, constantly confused with one or other. The same children matched colours, with fair accuracy, though by no means with immediate success, any shade of red being generally offered.

The teacher who carries on, and notes the results of, a series of similar observations on young children does not, it must be repeated, learn anything directly useful ; we know already that, generally speaking, children distinguish the strongly-marked primary colours first, and have a preference for gaudy reds and yellows ; and schoolroom and nursery decorations recognise such traits. Moreover, in most good Infant Schools and Kindergartens the constant employment of coloured balls, paint, and chalks fixes the whole series of distinctions satisfactorily without requiring guidance from minute observations.

But to observe even with one child the process of matching colours on different occasions, finding the colour just shown after its removal and giving the name to the colour pointed out, is a valuable opportunity of noting how the small mind works. One sees more clearly what perception in the sense of recognition means—interpreting or amplifying the present sense experience by the revival more or less vivid of past impressions. Thus the child is helped to distinguish a colour by having had it displayed alone before it is looked for among others ; red and blue are often most promptly found or named by reminding

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the child of her frock ; similarly, a green leaf, a yellow flower, etc., often becomes familiar before the colours of less interesting objects gain notice. A child of eight, for instance, who knew a grey dress quite well was unable to tell the colour of a grey sky. "Yellow" is of course a difficult name for a small child, who will sometimes substitute an easier one or say "Don't know" before making an attempt at the tiresome "'ellow". And the teacher will naturally find many of these observations upset by mistakes made out of pure mischief or by distraction in favour of some novel impression.

Later, colour distinctions help out perception of distance ; faintness of hues (*e.g.*, the blue of the far-off hills) being suggestions of remoteness.

Many observations have been made on the way in which sounds are distinguished. Musical
Hearing sounds the child is often able to distinguish and reproduce before he can speak. The fact that many young children seem to have no ear for tones, and make only approximations to the right tune, generally implies want of practice or of precision in hearing the notes. The auditory sphere of the brain is educated like the visual by receiving impressions ; the child soon gets to know a favourite sound, or series of sounds from the lingering effect of each repeated experience. Early opportunity of listening to and reproducing musical notes should be given, if delicate perception is to be acquired. As Preyer advises : " In schools of little children . . . no child should be excluded . . . from instruction in singing and music unless he makes

no progress at all after a somewhat protracted trial".¹ Experiments with children as young as four or five, not specially musical, show how readily two or even three notes are distinguished when sounded together on the piano. The octave is very frequently called one note owing to the completeness of the fusion, and in a less degree the fifths and thirds may be confused—*doh soh* or *doh mi* being thought single notes. But out of twenty tests the presence of two notes was distinguished in the one sound fifteen times by one child of four, and fourteen times by another, the mistakes being those just mentioned.

The close connection between sounds and movements is easily seen in singing games, dancing, or drill. The changes in the music come to stand for changes of movement, so that, even when sitting still, the child feels like dancing or marching at the sound of an approaching band. The familiar words of command in drill, or general movements in school, become bound up with the feeling of the actions following.

Some curious connections between perceptions of sight and of sound are sometimes made by children. Generally the sound of a name calls up a visual image; but occasionally single musical notes or special noises are translated into visual terms. The so-called "coloured hearing" implies that many children think of particular colours in connection with particular notes. This may easily be noticed in some of the younger children in school who see nothing unusual in questions on the point. No doubt many other

¹ *Infant Mind*, p. 14.

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examples could be found of what was noticed in a small boy's drawing of a train ; in front were some lines which, he explained, represented the *noise*.

The teacher may have made sure that the colour vision of her pupils is normal, that no strain is made on the eyes by too fine work, and that each child is placed so that he can clearly see the blackboard and clearly hear what is said ; the forms and colours of everything shown may be simple and striking ; and yet many things which might be expected to make a definite impression are not perceived at all, or only very roughly. Lack of observation, indeed, continues to characterise the perception of later years, so that we are often ignorant of the appearance of the wall-paper in a room used every day, of the background of familiar pictures, of the number of steps to our own room, etc. And this does not commonly result from inability to form visual images ; the omission to notice occurs while looking at the object—the disregarded part of the picture is simply not perceived except as undefined background. So we frequently fail to find things which are perfectly visible when our attention is occupied elsewhere. In a vague sense we see, but do not *look at*, the object.

Young children have a remarkable capacity for this overlooking until "some specially remarkable circumstance," as Stevenson says, "such as a water-cart or a guardsman fairly penetrates into the seat of thought". It is not enough that the object should seem striking to us ; we must find out whether it really is so to the child. When an elaborate model of an island was

**Training
of Perception**

shown to a girl of three the novel object was completely ignored in favour of the coloured chalks lying near. Sully notes¹ that when a small child is taken to see famous views, he does not see the wide prospect that impresses us, but he does see with an amazing minuteness the ins and outs of the rocks, and the possibilities for playing house.

It follows that perception is largely dependent upon interest, that is, on the feeling which goes with the satisfaction of habitual or instinctive tendencies. We invariably see best what is "in our own line". In the child's case this is the manifold activity, play; everything that can be turned to account here is perceived clearly enough; the most trifling marks distinguish one brick from another playing a different part. It is interesting to notice or remember the modifying influence of ideas on what is actually present to the senses; the wooden horse without legs does actually seem spirited, and the chair fierce like the imaginary dragon it stands for. "How lonely it is!" remarked a little girl, on coming into a bright, occupied room which had done duty as a deserted palace in a game the previous morning.

If, then, we wish young children to observe we must endeavour to present objects to them as materials for some kind of game, to be turned over and examined and used. If the characteristics of plants and animals are to be distinctly observed, the child must play at gardening and try to grow for himself, and make friends with pets by attending to their wants. The

¹ *Studies of Childhood*, p. 306.

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progressiveness of interest, the fact that every satisfaction of the active tendencies points the way to advance in the same direction, ensures a constant increase in perception. The small boy is continually noticing something new about the construction of engines or boats.

In this connection, the mistake of detached "object lessons" is obvious. It may be useful for the child to notice the qualities of common things, but to make him examine sponge one day, and fur the next, is an artificial and somewhat unprofitable method. Only fragmentary interest and detached perceptions, leaving faint traces, belong to such lessons. The skilful teacher always seems to be "going on," developing one subject, and bringing in other interests with due regard to the one most prominent at the time.

It is rather a number of observations of various kinds, then, than observation generally which can be trained. Allowing the overflowing activity of children numerous opportunities of outlet in various directions encourages observations of many kinds. "If we wish to encourage *general* observation we can only succeed by cultivating wide interests," says Professor Adams.¹ And if it is thought desirable that children should observe carefully what they pass on the way to school and the various steps and doors inside, etc., we must make special exercises or games for the purpose. Once the way has been learned interest is apt to move on to the journey's end, and only the distant point is seen.

¹ *Herbartian Psychology*, chap. vi. (The whole chapter should be read.)

INSTINCT AND HABIT.

WE have seen that out of a wide range of possible perceptions the child *selects* certain objects for notice. So long as we are inclined to dogmatise about what will be "best for" him to observe, we are not likely to see any system in his preferences, but when we are willing to study what Stevenson calls his "mythological epoch," as the lower animals and primitive peoples are studied, we shall watch the promptings of Nature, and no longer call those preferences childish caprice. Inherited tendencies to observe and act in a particular way are called Instincts. The activities awakened by Instinct are fixed by Habit. The educator's task is to supply suitable material for the one, and favourable conditions for the other, just as prey and practice are both necessary in the training of the hunting-dog.

Professor James defines Instinct as "the faculty of acting in such a way as to produce certain ends, without foresight of the ends, and without previous education in the performance".¹

It is, of course, more difficult to note fully developed instincts in human beings than in animals. This is due partly to the number of human instincts and their complex relations, and partly to

¹ *Principles of Psychology*, vol. ii., p. 383.

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the long period of infancy with its modifying influences. It is due also, as James shows, to the development of *memory*, which prevents the second performance of an instinctive act from being "without foresight," and which may cause modifications. Still, very many instinctive tendencies may be traced in young children. Those of earliest infancy have been studied in detail by Preyer.¹ They include, in the first three months, sucking, clasping with fingers and toes; a little later biting, grasping at objects, and conveying them to the mouth; by the fourth month holding the head up; then in varying stages of security sitting up, and towards the end of the first year locomotion, beginning with creeping. The suddenness of the child's awakening desire to creep or stand shows the instinctive nature of the activity. Swallows, as Preyer points out, do not *learn* to fly. When kept in confinement till fully fledged, and then liberated, they fly immediately. We speak of *teaching* children to walk, but the child's own impulse supplies the starting-point, and it seems probable that if the attempts to walk were, on their first appearance, delayed by artificial means, the child might walk at once. That is to say, the nerve centres ripen in a pre-formed order, owing to heredity, and the suitable stimulus, *e.g.*, contact with the floor, calls forth a necessary and unforeseen reaction when the motor centres which control the movements of walking have developed. Picking up things with the mouth when creeping on the floor, like grasping with the toes,

¹ *Mind of the Child*, pt. i.; *Senses and the Will*, chap. xi.

suggests the inheritance of instincts from pre-human ancestors.

The instinct of vocalisation is the starting-point of language, but it must combine with the in- **Vocalisa-**
 instinct of imitation (which it does at the age **tion**
 of eight or nine months), before the beginnings of *speech* are heard.

We have mentioned as among the earliest instinctive emotions, curiosity, fear, and anger. **Instinctive**
 Certain stimuli inevitably arouse these feel- **Emotions**
 ings, and their expression is equally unpremeditated. Darwin explains many of the expressive reactions as instinctive—as survivals in weaker form of movements once useful. Thus, the expression of anger represents movements of fighting or killing, much modified ; that of fear, movements of flight, and so on.

Sympathy is the most attractive of the child's instinctive emotions. It is obviously bound **Sympathy**
 up closely with imitation, but there can be no doubt that the child enters into the feeling of pleasure or pain, and does not merely imitate its expression. The intimate bond between mother and child makes it natural that sympathy will be most readily shown here. If the mother only pretends to cry the child offers the most strenuous consolations, or weeps too. Children share quite tragically in the troubles of a companion in disgrace, and are often moved to unexpected tears over the picture of a child in distress. A small girl of four was being entertained with what seemed to the elder sister a humorous poem about a greedy child who drank the cream from a large

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pitcher in which her head stuck. The story was interrupted by sobs, and not even the sight of the broken pitcher and liberated culprit gave consolation. Mr. Sully brings out admirably the close sympathy of children for animals, who seem more akin to them than most grown people are. "In a sense a child may be said to belong to the animal community."¹ It is true that the pets of the household suffer much at the hands of the little ones, but this is chiefly through ignorance. Children are just as reckless of hurt to themselves in romping. The "hunting instinct" common in boys, found even in the youthful Wordsworth,² develops later. Small children are often fond of frogs and worms, and mice are almost always favourites. It will be noticed that *little* animals are, on the whole, dearest to the child. With them he naturally makes common cause. An animal's punishment or death is perhaps the blackest thing in a young child's life. It is interesting to observe the division of sympathy between dolls and animals; frequently an intense interest in one direction is balanced by coldness or positive dislike in the other. Children, not boys only, who are devoted to animals may be really malignant to dolls. Apparently the strongest passion may be aroused on a doll's behalf, and a little girl resents any slur on the personal appearance of the most battered favourite. The nursery tales and the object lessons of the Infant School have wisely

¹ *Studies of Childhood*, p. 247.

² *Prelude*, bk. i., ll. 310-325.

made great appeal to the interest in animals, though in the school systematic, and even technical, description of the animal has sometimes taken the place of arousing affection for it. The keeping of pets in the Kindergarten is the ideal method. If animals are to be discussed they should be fairly familiar. Lessons on strange beasts from pictures can hardly evoke much sympathy. It may be well, when telling stories about animals to young children, to remember the probable heart-rending effect of a tragic conclusion. The old stories wisely metamorphose the dying Beast into a Prince, alive and well. The Ugly Duckling's sufferings are only just made tolerable by its final triumph; even after this had been described, a little boy of five protested pathetically, "But I don't *want* them to have been rude to the duckling!" It is sometimes possible to note the point at which an almost exclusive interest in animals gives way to the discovery that human beings are interesting. A little girl of seven, who had learned to read early and read nothing but animal stories, was lent a book which had given her supreme delight before. But the charm was gone; there seemed nothing in the story, and it was only when indifferently turning over the pages that she hit upon a new attraction in a story about children.

The child's "arrogance of disregard" for his elders, then, is no sign of lack of capacity for sympathy. To his animal and child companions he shows a sympathy whose keenness compensates its transience. It is only "those elders who care so little for rational

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enjoyment, and are even the enemies of rational enjoyment for others" whom he "accepts without understanding".¹ The teller of stories consequently requires to know in what direction the child's sympathies have been aroused before accusing him of callousness. Generally the grandmother in "Red Riding Hood" is sacrificed without a qualm, but the story will have to be modified if the listener's real grandmother is a familiar friend.

The instinct of curiosity shades off rapidly into acquisitiveness. The strange and striking object is first gazed at, then grasped at, and then probably carried off to bed. Almost all children keep hoards of some sort—small and portable objects being preferred. When taught not to ask for what they see, they adopt the quaintest periphrases to indicate their desires. If we do not want constant demands for what will not benefit the child, we can only appeal to another instinct—the constructive tendency, and encourage constant use of what has been collected, for the purposes of games. *All* the shells, pebbles, etc., should help to make the garden, as Froebel advises that all the bricks in the box should be used in the various objects built. Again the acquisitive or collecting impulse is as likely to lead to generosity as to selfishness, if sympathy with others in a common purpose is aroused. Children in school are delighted at being able to supply the teacher and other members of the class with "specimens".

¹ R. L. Stevenson, *Virginibus Puerisque*, "Child's Play".

Constructiveness, which so often appears like destructiveness to the adult, is an instinct especially to be encouraged. Children are always making and remaking; they destroy toys to put them together in different forms, or to use their parts for different purposes. Bricks which will serve in so many ways, from the parts of a house to its inmates, are invariably favourites. To be sure, the child's desire "to make something else" commonly gives him little time for admiring "the great Babylon that he has built"; and "Shall we knock it down?" or "Shall we rub it out?" is the question which immediately follows the completion of building or drawing. Delight in the manipulation of materials accounts for much destruction with scissors and knives. There seems to be an instinctive element in what is constructed, in the passion for "building houses," etc., and in the sex differences, the boy preferring to use tools, while his sister attempts to sew. In the latter case, no doubt, imitation accounts for much; but though little boys have been known to possess a passion for "fancy work," they generally seize on the more masculine implements with very little prompting.

The fighting and hunting instincts, which undoubtedly exist, offer no great difficulty. Modern children are satisfied with the dramatic expression of them. A fight with a dragon or a lion-hunt is stimulating, and leaves no resentment when over. Moreover, it generally involves some one's rescue from danger and an agree-

Constructiveness

Pugnacity:
Hunting

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able excitement of sympathy. Little children up to seven or eight do not commonly care for the combative games of skill with their elaborate and conventional rules and absence of "story"; Stevenson's case will be remembered of the little boy "who was mightily exercised about the presence of the ball" in the game of football, "and had to spirit himself up, whenever he came to play, with an elaborate story of enchantment, and take the missile as a sort of talisman banded about in conflict between two Arabian nations".¹ However, though the combative instincts are best provided for in play, it must be admitted that they are displayed in earnest by the best of children at times.

The lack of permanence in instincts, and their liability to modification by imitation and habit are counteracting influences. But there is generally in a class some child who is not merely impulsively pugnacious, or thoughtlessly cruel, but seems to delight in hurting his companions. If the child is young, and, as often happens, quiet and phlegmatic in school, there is the utmost difficulty in checking these instinctive outbursts of savagery. Close supervision, to prevent opportunity of injuring others, is necessary, and the attempt must be made above all to break down the barrier of stolidity in order to discover other tendencies which may be set to work. The frequent cruelty of small children to flies, etc., seems a survival of the hunting instinct. It certainly does not appear to be deliberate desire to hurt; the creatures are not

¹ Essay on "Child's Play".

thought of as animals ; curiosity and the excitement of capture mingle.

Imitation, the instinct of greatest service in education, is first of all unconscious : at four months Preyer's child imitated the protrusion of his father's lips ; babies about this age smile back at those who smile at them. There is, of course, nothing intentional in this ; imitation follows immediately on perception, suggesting a connection between the centres of vision and the subordinate motor centres. In adult life, when we look the way every one else is looking, or cough when some one else coughs, the imitation is equally unconscious ; we *find ourselves* performing the action. As perceptions become clearer and more complex, more difficult gestures are imitated, and sounds are also reproduced. When, towards the end of the first year, the child *tries* to imitate, and shows delight at success, there is more than the blind impulse to reproduce a movement seen. This is why Preyer treats imitation as something beyond a mere instinct, as being, in fact, voluntary.¹ Compayré shows that there are different stages of imitation.² A movement may be unconsciously imitated at first, then the child perceives his own movement (which is likely to have a greater effect than the original gesture merely *seen*) ; if he goes on reproducing it, he more or less knows what he is doing and enjoys it. Then the effect left on the higher centres (the kinæsthetic centres) makes it possible for him the next time he sees the move-

¹ *The Mind of the Child : The Senses and the Will*, p. 282.

² *Later Infancy of the Child*, chap. i.

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ment to imitate it deliberately. The impulse to copy is still instinctive, but the child knows now what he is going to do. By the third year much more initiative is shown, and everything which interests the child tends to be imitated in play. This is taken advantage of in Froebel's games and songs in the *Mutter- und Kose-Lieder*. By means of representation of the sounds and movements of things around him the child gains clearer insight into them, "makes the outer inner," as Froebel generally expresses it.

Mr. Stout shows that imitation is generally attempted with a view to making an interesting activity more fully our own.¹ Naturally, then, the other instincts are reinforced by imitation; the child puts in his pockets what he has seen others collect, builds as some one has built for him, and so on. Sympathy is so closely bound up with imitation that the speech and gestures of grown-up companions are often quaintly reproduced.² The admired model's defects are as likely to be copied as his graces, and the children "turn their own perfection to abuse to seem like him," as the English youth copied Hotspur's "speaking thick". When we notice the way in which little children reproduce gestures, phrases, tone of voice, and accent with the greatest facility in the first few years, we should endeavour to supply the youngest classes with the best possible models. To listen to a mite of four

¹ *Manual of Psychology*, vol. ii., p. 271.

² For an instance see Baldwin's *Mental Development in the Child and the Race*, p. 362.

or five reproducing our style of teaching is sometimes a melancholy revelation.

The child of three, it will be noticed, imitates differently from the child a year or two older. The former continues an activity blindly, unable to modify it at a new suggestion ; the latter adapts himself more readily to a fresh phase, and is much more critical of his results. Up to five or six, children are generally as ready to imitate moving *things*—windmills, trains, etc.—as animals and people. Later they must be characters in a story, and the confusion that may arise among children in different stages of interest is obvious. There was some pathos in a little boy's protest to a slightly older comrade who wanted to act Achilles, "I'm not a Trojan—I'm a *bear* !"

Though many undesirable things may be imitated the admirable zeal with which children play their part, insisting on being correctly addressed, is worth encouraging. A lad of five helped out his realisation of being a firework by *spitting*, and behaved finely over an accident to himself as an excursion train in which "no one was hurt except the train".

It is, then, a sound principle of the Infant School to perform oneself whatever one wishes the children to do. Consequently, some dramatic power and the absence of self-consciousness are needed. The more whole-hearted is the teacher's performance the less the children can help imitating, and it is generally noticed that the most unruly new-comer falls into the movements of the others, though an infant who has only grown-up companions may not like

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joining in imitative games—may not want “to be a pigeon”.

The very numerous activities included under play have their beginnings in the instincts. **Play based on Instincts** “They involve hunting, fighting, rivalry, acquisitiveness, and construction combined in various ways; their special rules are habits, discovered by accident, selected by intelligence, and propagated by tradition; but unless they were founded in automatic impulses, games would lose most of their zest.”¹

The differences of sex in play have been frequently commented on, and the preference of the **Sex distinctions** boy for a horse, the girl for a doll, etc., pointed out, but it is very difficult to make sure that we have here an instinctive connection between the perception of the horse or doll and the difference in preference according to sex. Many young boys love dolls; girls sometimes dislike them; and the way in which imitation and social influence generally affect the child may account for the difference. At any rate the distinctions of sex are certainly not marked enough in play to make distinctions necessary in the Infant School.

All this shows that the development of a child's instincts in play gives the educator very considerable guidance as to what should be provided for in the school. And since **Different Instincts appear at different ages** instincts show themselves at different ages their first appearance should be noted. We should

¹ James, *Principles of Psychology*, vol. ii., p. 427.

be on the look out for the "budding point" of a new phase of activity, as Froebel constantly urges. "In all pedagogy," says Professor James, "the great thing is to strike the iron while hot, and to seize the wave of the pupil's interest in each successive subject before its ebb has come."¹ For, as we have seen, instincts are transient. The constructive tendency, the hunting or fighting instinct, for instance, frequently disappears in later childhood if few opportunities for its satisfaction have occurred.

Again, the development of one instinct may prevent another from appearing at all. If, at the age when sympathy with animals is the prevailing characteristic, children at home or in school are encouraged to keep pets of many kinds and instructed in their ways, it is most probable that the hunting instinct will not develop. Imitation suggesting at first the form of satisfaction of an impulse, other possible ways of playing a game may never occur to the child.

These two characteristics of instinct are at once a help and a warning to the teacher. On the one hand, an undesirable instinct may pass away, owing to lack of scope for its exercise, and the appearance of a stronger passion which may safely be satisfied; or a tendency which has been encouraged may hold the field against a momentary inclination in a new but less desirable direction. The teacher has some control over the instincts themselves, and more over the way in which

Inhibition
of one In-
stinct by
another

Import-
ance of
guiding
the In-
stincts

¹ *Principles of Psychology*, vol. ii., p. 401.

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they will be manifested. On the other hand, she may neglect the right moment for encouragement or repression, failing to fix a worthy trait or allowing an unworthy one to become fixed.

This brings us to the law of Habit. The physiological basis of Habit is the plasticity of the nervous system. The currents passing along the sensory nerves to the brain and finding their outlet along the motor nerves leave their effect. A second stimulus will start a current which will traverse the path already made pervious. The more frequently the same stimulus gives rise ultimately to the same action the more inevitable the connection becomes. This is especially true in early youth when the brain is rapidly developing. Permanent paths are then most easily formed.

Every human activity, thinking and feeling as well as doing, is subject to the influence of Habit. Generally speaking, "our nervous system grows to the modes in which it has been exercised".¹

The educational advantages of this principle are summarised in Professor James's well-known chapter on "Habit".²

(1) In the first place habitual actions are performed with increasing promptness and accuracy, with the greatest economy of movement, and consequently with the minimum of fatigue. A child's first imitations of the teacher's movements in clay-modelling are clumsy

¹ Dr. Carpenter.

² *Principles of Psychology*, vol. i., chap. iv.

and uncertain ; the clay is worked with very unnecessary violence ; and, of course, the child twists his body this way and that so as to grasp his materials with the greatest ease. After much practice, the work is done quickly and confidently, with lighter touches, with fewer general movements, so that there is no feeling of having gone through an arduous struggle. The same thing is very noticeable in teaching drill, and indeed might be illustrated from the acquirement of any new activity.

(2) Secondly, as a movement becomes habitual the conscious attention required in performing it diminishes, till it can ultimately be performed mechanically, leaving the mind free to attend to what is not yet completely mastered. The first time an impression reaches the brain and results in a movement, the resistance overcome by the current in its new course, and its overflow, so to speak, into other channels (causing the useless motions mentioned above) are naturally accompanied by vivid consciousness. As the new path is traversed again and again with increasing ease, and the overflow movements disappear, there is less effect on consciousness. Finally, the perfect ease and mechanical accuracy of the frequently performed movement imply practical unconsciousness. The movement has become almost reflex—*almost*, for it is started consciously.

To take an illustration from a child's carrying out a series of similar movements in drill : the *first* step is conscious ; he sees the teacher's movement, or remembers the correct one from the word of command ;

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this perception or memory immediately arouses the idea of movement, the motor tract carries the impulse to the muscles, but the rest of the series is carried out unconsciously. In other words, an impression reaches the visual centres, is conveyed by a fixed path to the kinæsthetic or motor centres, which set in action the lower motor centres directly connected with movements; after the first impulse the lower centres take entire charge of the rest of the series which, so to speak, acts itself out mechanically, until the higher centres are again called into activity by a change of movement in the teacher, etc. Meanwhile, as we say, the child is probably "thinking about" something entirely different, and, as we frequently find in drill, is apt to continue the mechanical movements long after a new order has been given. Such complex processes as reading aloud or reciting familiar poetry may be performed so mechanically that the attention is left free to occupy itself with other words or actions. Obviously the more processes are handed over, on being acquired, to the unconscious reflex life the more we are able to aspire to new conquests. Thus the capable infant teacher on first taking a class secures attention by special appeal to the children's instinctive curiosity, etc., and by her bright and confident manner. Having once secured it she gives it no opportunity to lapse and a habit of listening to her is formed. Later, on exceptional occasions, when the work is less fascinating in itself, or when the teacher is busy, the children will behave well in her presence. The economy of time thus procured is best realised by contrast

with the waste in classes where every lesson involves a struggle for "order" at the beginning, where work is constantly interrupted by strained relations between teacher and taught, or spoiled by irritation on one side and indifference on the other.

Two conditions must be observed to secure the successful formation of a habit. The first is to *make a good start*; this gives a certain momentum. "We must," as Professor James says, "take care to launch ourselves with as strong and decided an initiative as possible." The second is to allow no exceptions, at least while the habit is being formed. "It is necessary in such a situation never to lose a battle."¹ The teacher who secures good order one day, and is slack the next, has probably, like Sisyphus, to begin again from the bottom of the hill on the third day.

Conditions of establishing a Habit :
1. "A good start"

2. "No exceptions"

Finally, habit assists the educator owing to the fact that activity of a certain variety gives capacity for other activities of the same kind. Children trained in the Kindergarten will prove adaptable and skilful in later work requiring manual dexterity. If we insist on the virtue of children's "being seen and not heard," and do not give them opportunity for telling and acting stories and discussing what is interesting to them, we cannot complain that they are not bright and responsive in our lessons, and appear tongue-tied

Habit in one direction gives ease in similar directions

¹ Bain.

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when asked to repeat what we have been saying. "It is not simply *particular lines* of discharge," says James, "but also *general forms* of discharge that seem to be grooved out by habit in the brain."¹

We must, then, build habits on the basis of the transitory and often conflicting instincts.

Summary The instinct is, so to speak, raised into a conscious purpose by exercise and education through the principle of imitation. Becoming a fixed habit its exercise is again largely unconscious, but now this implies the ability to perform definite series of movements with promptitude, ease, and accuracy, and the capacity to acquire others of the same kind. And it is encouraging to reflect that children acquire good habits easily. They have a very keen eye for breaches of etiquette on the part of the uninitiated elder, even when it would be to their advantage to acquiesce. With delightful pharisaism they reproach one for breaking the laws of the nursery. The small girl's delicate reprimand, "Oughtn't we to get into a line?" to an inexperienced teacher who was letting the class go indiscriminately is a sufficient indication of the way in which habit may enlist children on the side of law and order, against the tendency to run wild attributed to them as natural.

¹ *Principles of Psychology*, vol. i., p. 126.

THINKING AND SPEAKING.

THE relation between thought and language is so close that they have often been held inseparable. Consequently the child's first attempts at speech are greeted as an event of great importance, and mothers and nurses read the deepest meaning into the inarticulate babblings which precede. Yet it is evident that thinking appears before language.

Thinking
precedes
language

Thinking may be considered as the capacity to make of our experiences a coherent whole. The *mental* equipment exercises an influence over the new perceptions, etc., just as the food assimilated by an organism becomes part of the organism and has its share in affecting new material. Obviously the main characteristic of mental assimilation must be the mind's capacity to recognise (among the presentations of the moment) *the same* feature as one of its own elements. Thus the vague sense of recognition with which the infant regards the incidents in the preparation of his food ; the more developed recognition with which, later, he welcomes *his* toy, and the complete recognition with which, later still, he matches simple colours—all show how the element of *sameness* is seized upon.

Character-
istics of
thinking


Assimi-
lation
seizing
upon
sameness
in Percep-
tions

Developing at the same time with the recognition

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of sameness is the power of discrimination or the **Discrimination** ability to grasp differences. The number and complexity of the things presented to the child's mind make discrimination necessary as a means to sure identification. Thus salt and sugar look much alike, but a mistake in tasting the one for the other will affect the child so as to make him in future attend more closely to the appearance of both. The power of recognising sameness is strikingly exhibited when the child adapts himself similarly to a number of things with salient features in common. How many objects can be nursed as a doll, for instance! The child with a pet cat wants to stroke every animal, and after plucking flowers in a field may try to pluck the flowers in a picture. So a dog who has been taught to beg at meals may beg for things on the table when no one is in the room. The child, too, shows broad identifications in his different behaviour towards different groups of persons, towards other children, towards strangers, etc. Discrimination is shown in the selection of the familiar element among many, and the uniform mode of acting towards it makes the fact of recognition evident.

The more the child is observed in his recognitions, whether of individuals or of groups, all members of which may be treated as the same, the more is the effect of past experience in influencing the present seen ; though so long as the effect is merely to make the present experience vaguely familiar, and cause the same reaction as previously, we can scarcely say that the child is *thinking*.



But when, with the growth of memory, former experiences can be kept vividly before the mind, and the new perception recognised by resemblance to it, thought is more apparent. Again, when a part present alone suggests the whole past experience (as where the infant holds up an ear-ring to the mother's ear,¹ or where he places correctly a piece in a picture puzzle, or fits his bricks into the box in the old way), he is obviously guided by a more or less vivid mental picture of how the whole thing looked before, and tries to make the part which he holds occupy the same place as formerly. Preyer mentions also what may often be seen before a child can talk: he is unable to reach a toy, looks round, finds a stool, climbs on it, and gets the toy.² Perhaps he has seen others reach high things in this way, or been helped to do so himself, or hit on a similar expedient accidentally in his scrambling. The point to notice is that in the absence of the stool first used the child seizes something else (*e.g.*, a large book) and makes it serve. In the ability to single out the element of *sameness*, and to make various things *do* in virtue of their possessing it, the child is far in advance of the most intelligent animals.

The mental state already existing may modify the incoming impressions. If the child is hungry, biscuits are things to be eaten, but if building is the predominant interest, they may be regarded rather as walls

Distinct
recogni-
tion shows
thinking
clearly

Placing a
part in the
right re-
lation to a
whole

¹ Preyer, *Infant Mind*, p. 86.

² *Id.*, p. 85.

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and roofs. The two interests combine in the two boys described by Stevenson eating their porridge—which represented to the one who ate it with sugar a country continually buried under snow, and to the one who ate it with milk a country suffering inundation.¹

Pre-dominant interest determines identification

The ability to single out the features which a group of things have in common, and to treat all members of the group as identical for any particular purpose may be called Generalisation. Throughout the process can be traced that function of identifying amidst changing aspects and associates which psychologists call distinguishing the Universal from the Particulars—the function, that is, of Conception.

Generalisation a form of thinking or Conception

Individuals and classes are both *conceived*. When a child, before he can speak, cries obviously for his mother, is soothed only by her presence, and is aware of it even in the dark, he must have some sort of conception of an individual. It is evident then that, as Preyer urges, “thinking cannot be taught to any one by instruction through words”. The earliest recognitions and groupings take place before a child can use and before he can understand language.

Speech, however, is of great importance as thinking develops.

Speech assists thinking

In the first place words bring general impressions into greater clearness. The ability to *name* objects, or certain features of objects, or the

¹ Essay on “Child's Play”.

memory of these, implies fixing the attention on what is recognised.

Secondly, words are convenient symbols for the things which they signify. Instead of dwelling on all the details, more or less useful, of an experience, one is enabled by using words to keep before the mind its main features, or at least a hint of what they are, and so to pass on to reading new experience in their light.

1. Words help to fix attention on objects and images

2. Words suggest main features not irrelevant details

Thirdly, language is the means by which we communicate with others and are able to receive from them that great body of ideas with which our own concrete experience does not provide us.

3. Words as a means of communication

For none of these purposes is language absolutely indispensable. The artist can think in forms, the musician in sounds, and communication can be carried on by gesture. "Gesture," says Romanes, "psychologically precedes speech." And in young children the gesture accompanies speech, helping them to eke out self-expression, and aiding them in comprehending others—a fact utilised in the action songs of the Infant School and in the attempt to make stories as dramatic as possible.

Preyer gives an exhaustive account of the stages in a child's acquirement of speech.¹ Individuals vary to so great an extent that the records of observation as to the age at

Stages in the acquisition of speech :

¹ *The Mind of the Child*, vol. i.; *Development of the Intellect*, chap. xvii.

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which certain sounds are first made and seem first to be used with meaning differ greatly. Certain general results stand out, however.

First of all the child makes sounds instinctively, generally expressing distinct pleasure or pain, sometimes merely exercising his vocal chords. Though these sounds are not deliberately produced, the fact that the mother is able to discover their cause and to satisfy the needs which they indicate will later lead to a connection between the sound and the satisfaction.

The child next begins to imitate the sounds which he hears himself make, and in the first six months we have babbling repetitions which show a certain amount of pleasure in the effects produced. The sound on each occasion makes an impression on the hearing centres, and serves as a stimulus to the centres for producing movements of the larynx, which are close to the hearing centres. Later, the sounds made by others are imitated.

Before there is any kind of meaning attached to sounds the child has practised a considerable range of vowels, and acquired the power of pronouncing certain consonants (*m* first) and of combining and modulating in various ways.

An important step towards the acquisition of language proper is made when any sound is employed for a special purpose. The “*m*” sounds seem specially connected with desire for food; dental syllables, “*da*,” “*nda*,” etc., accompanied by pointing or grasping, with curiosity

1. Vocal-
isation at
first in-
stinctive

2. Imita-
tion of
sounds

3. Sounds
used ex-
pressively

and pleasure at the presence of some new object. The mother's comprehension of these signs is likely to fix them, and to lead to their deliberate use, the child foreseeing their result.

In this sense the child may be called an inventor of speech. Most probably, if his elders did not supply him with their words, more of these sounds spontaneously produced would be used intelligently as a means of communicating wants and simple emotions at first. Preyer gives the sound "*ata*," with variations, as used by his son at the end of the first year with a sort of meaning, namely, association with the removal of a light, a person's disappearance from the room, etc.¹ This sound is applied more widely in the next year, and something like it is almost invariably used by young children on going out, or seeing some one else go. Darwin's boy used the sound "*mum*" for food. These "inventions," however, disappear as the child learns to imitate his elders' words, and only the occasional instances of the use of a private language in the nursery indicate any answer to the question of how far the child is capable of originating speech. Children undoubtedly take a delight, even after they can talk, in chattering to themselves in unknown tongues. Professor Sully mentions the case of twin American boys who developed a language of their own instead of English,² and a little girl and her elder sister carried on conversation in inarticulate sounds—combinations

Is the
child
capable of
inventing
language?

¹ *Development of the Intellect*, p. 111.

² *Studies of Childhood*, p. 145.

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with “*n*”—with the emphasis of ordinary speech, however.

Imitation of the sounds made by others is noticeable in the second six months. In the beginning the sounds produced are mere parrot-echoes, but if the mother, when pronouncing the word “milk,” for instance, does so always in connection with the food, imitation of the word is likely to be associated with the sight of the milk, and the sound will acquire a definite meaning. Generally it is towards the end of the first year that words begin to be intelligently imitated. Before this time a child may understand many words and gestures without attempting them himself. The second year shows rapid advance both in the acquisition of adults’ words (more or less modified) and in the invention of onomatopoeic words.

It is now possible to speak of the development of the speech area in the brain. The centre controlling the movements of speech is situated on the *left* side of the brain; whatever stimulates this region gives us the feeling or idea of the movements of articulation; the hearing zone, in close proximity, soon develops connections with the speech centre, resulting, as has been seen, in the tendency to reproduce sounds heard. The left hemisphere of the brain, it should be noted, also controls right-handed movements. The greater development of the left side of the brain with reference to these two characteristics is discussed by Professor Baldwin, who

sees a connection between speech and right-handedness in the much more frequent use of the right hand in gesture language among primitive peoples.¹ Injury to this part of the brain results in aphasia—inability to produce or understand speech. Preyer has considered in detail the various forms of aphasia in order to throw light upon the reasons for the child's very gradual and stumbling progress towards speech. The child whose speech centre is not yet completely developed makes mistakes in articulating or does not understand what is said, just like the adult whose speech area is impaired. The child's imperfections are of two main kinds : (1) difficulty or incapacity in enunciating and combining words ; slowness and stammering in utterance due to immaturity of the mechanism of speech and lack of practice ; (2) confusions in the application of words and in using them to narrate—resulting from lack of experience and of fixed associations between words and objects or ideas. These imperfections will gradually disappear, especially if the child is regularly exercised in imitating words carefully sounded and applied. Hailmann justly protests against the continued use of “ baby-talk ” and ridiculous contractions, when correct naming might be taught.² But we must not expect to be able to substitute grown-up words in every case for the “ little language ” of the nursery—the difficult “ mother ” for

**Reasons
for slow-
ness in ac-
quirement
of speech.**

¹ *Mental Development in the Child and the Race*, chap. iv., and Appendix B.

² *Education of Man*, p. 51.

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the familiar "mamma," the prosaic "dog" for the dramatic "bow-wow".

Most of the child's imperfectly pronounced words may be explained by the law of least effort. In attempting to imitate a sound the immature mechanism produces what it most easily accomplishes, often leaving out difficult combinations. Thus we have 'ook for *look*, 'ellow for *yellow*, 'tair for *stair*, and innumerable other omissions of consonants, while there is almost universal substitution of *f* and *w* for the difficult *th* or even *s* and *r*—*fank* and *feepey* for *thank* and *sleepy*, *wun* for *run*, and so on.

Particular nations have a predilection for (or an aversion to) particular sounds. Hence when a word from a parent language appears in different derived languages it generally appears under different (though allied) forms. Thus in the Greek *phratēr*, the Latin *frater*, the German *bruder*, and the English *brother* (which all represent the same original), the labial is represented by *ph* or *f* and *b*, and the dental by *t*, *d* and *th*. Philologists have pointed out many general similarities between the race tendencies and infantile substitutions. In both the substitutions follow some system. By infants, for instance, one sound is substituted for another of the same class, the labio-dental *f* for the aspirated dental *th*, or sibilant dental *s*; the liquid *l* for the liquid *r*, or the labio-guttural *w* for *r*, etc.

Again, *w* is frequently substituted for the labio-dental *v*, sometimes doing duty in the same word for

Imperfect
articulation:
1. In-
ability to
produce
certain
sounds

v and *r* as in *wewwy*. The labials are most easily mastered; the various dentals and sometimes the aspirate cause a great deal of difficulty. *G* and *k* are often changed to *d* and *t*—*good* to *dood*, *could* to *tould*—a similar change from back to front being sometimes found in the substitutions of adult language (cf. *bat*, a corruption from the Middle English *bakke*). In words of two syllables the tendency to reduplication causes many curious forms—e.g., *sug-sug* for *sugar*, *pur-pur* for *purple*,¹ while single-syllabled words are lengthened by reduplication, as *ni-ni* for *nice*, *mik-mik* for *milk*.

Inaccurate *hearing* of the correct sound has a good deal to do with children's mistakes. Acc- 2. Im-
cent and intonation are as a rule correctly perfect
reproduced—the child who says *effelant* hearing of
for *elephant* gets the stress right. In fact one can sound
frequently guess at the word the child is attempting
by noticing the stress. The child who said that a
sick dog must be sent to the "Homæo curials," was,
of course, trying to reproduce "Home for Incurables".

The pride and pleasure taken in fresh attainment make regular exercise in pronouncing words by no means irksome to the youngest children in the Infant School, and such exercise lays a sure foundation for later reading. The teacher must give constant practice in clear enunciation, noticing what sounds are difficult to the children, repeating these distinctly again and again, and giving time for the small experimenter's efforts.

¹ Sully, *Studies in Childhood*, p. 157.

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When the child begins to combine words into sentences, the difficulties of articulation often appear in the stumbling and stammering, in the slurring of words together, or in the pouring of them out with a rush so that the tongue gets "into a knot". What he needs is patience from the elder listener, and occasional help with the awkward word.

The child's grammar, like his pronunciation, illustrates the "law of least effort". He simplifies by using one form out of several; choosing the one heard most frequently, or perhaps the one appealing most to his ear.

The child's grammar: inflexions simplified
The preference for the objective case—for *me* to *I*, for *him*, *her* and *them*, to *he*, *she* and *they*—suggests both predilections; *me* and *her* have similar or nearly similar possessives, the nominatives stand alone; *him* and *them* fortify each other; and we have seen that there is a liking for the *m* sounds. Verbs as well as pronouns are treated in most revolutionary fashion. The verb "to be" suffers most, its complexities being quite beyond an infant's grasp. *Is*, *are*, or *am* is selected and applied indiscriminately, and discrimination comes before correctness, *them is* and *we am* being given with equal conviction.¹ The participles of other verbs cause most trouble; there is no uniformity of practice, but on the whole there is a tendency to convert strong to weak, *e.g.*, *hid* and *flew*, to *hided* and *flied*; but sometimes the change is from weak to

¹ A boy of three, to the question "Did you say 'I are'?" answered proudly, "No, father, I said 'I were'".

strong, as in "it *swoll*" for "it *swelled*"; and such odd combinations as *hidened* are not unusual. Auxiliaries cause further complications, and we have "didn't came," "was you was?" "didn't ought," and "did you went?" and even "was you been?" In all these cases we see the workings of memory, and the endeavour to apply to a particular case what appears to be a general rule. Children's mistakes are often more logical than our practice.

Turning to the child's application of words, we see that at first common names of persons and of things are both applied to one person and one thing. The former will ultimately become proper names, and the latter will be extended to cover whole classes, but originally they are practically on a level, *both* referring to an individual as such, as *dada*. And when the child begins to extend the application of his terms, he does so just as readily with *dada* as with names of things.

Mistakes
in applica-
tion of
words :

Proper names are used very hazily for some time. Of course in his own family the child readily learns the names of the different members ; he sees them constantly, and hears every one else use the names. But with his toy animals he hovers between individual and general applications. A boy of four called all his horses "Dobbin," and donkeys "Jack". When some one suggested Jack as a name for a new horse, he gravely explained, "We doesn't call horses *Jack*, we calls them *Dobbins*". Moreover, children do not see why names should not be given to other toys. When informed that his new tram-car

1. Use of
proper
names

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and motor-car "did not have names," the same boy declared, "them ought to".

General terms or class names are arrived at by a process of extension. At first, owing to the limitation of his surroundings, a child is largely confined to the particular. But he is always alert in grasping resemblances, even when the sameness is confined to very superficial matters, and, as it has become natural to him to utter the name when he sees the object known, he promptly identifies and labels the new article. A little girl called a horse's rosettes "sleeve-bows," because they were of the same tartan ribbon as tied her sleeves. Another child extended the term "grave" to both tombstones and wreaths under glass shades, owing to the identity of place in the original experience. Taine's case of a one-year-old child's extension of *fafer* (*chemin de fer*) from the railway to steam-engines, then to a steaming coffee-pot, and so to all steaming, hissing things, was a remarkable example of precocious generalisation.¹ But a child will not allow other people's inaccurate applications to pass where he makes distinctions. The teller of a story about a dragon which breathed forth fire and smoke "like a train" was interrupted by the scornful correction, "Trains have *steam*, not smoke".

Naturally the naming of complicated actions is very apt to lead to confusion, and when a small child plays shop *buy* and *sell* and *cost* often get inextricably mixed. Here is a real con-

2. The
child's
use of
general
terms :
(a) Nouns

(b) Verbs

¹ *Studies of Childhood*, p. 163.

fusion of ideas, for obviously the child understands *giving*, but not exchanging; the "shopman" often gives the money as well as the goods. Again, when a little girl of five said that the doctor had *given* the patient her temperature, she was applying the familiar conception of giving medicine to an apparently similar case.

In hearing a child tell a story, then, we shall notice that his vocabulary is very limited; the details in the story are prominent, words denoting familiar individuals and the simplest class names are employed. Very few qualities are singled out—*good* and *naughty*, *pretty* and *ugly*, *big* and *little*, (c) Adjectives and obvious colours do duty for description, generally helped out by gesture and expression, or reference to some real person possessing the quality, as in the case of the "Father Bear, the Mother Bear, and the Baby Bear". On the other hand, the few words are applied with charming audacity, those most suggestive of concrete experience being preferred, as when *any* part is "a half". The attempt to make children draw and colour and otherwise illustrate what they are required to describe helps to call their attention to qualities and relations which would otherwise be very vaguely apprehended and doubtfully named. In another way a child's play shows how the application of terms to fresh cases helps to impress their meaning; he is always calling the sofa "a boat," and so on, to suit his purposes in play, and the more versatility he shows in this direction the more thoroughly he grasps the essential features of a

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"boat". So we find a great difference between, on the one hand, the child's grasp of what he means by his own terms and confident application of them, and, on the other, the insecurity of his hold on the formidable "noun," "verb," "tens," and "units," when these are introduced to him as other people's names for things outside his interests.

These main results appear from a consideration of the workings of the child's mind as indicated by his use of language. From the first the child makes some sort of system out of his constantly changing perceptions ; he recognises sameness among them, and so groups those of like kind together, adapting himself in the same way to each member of the group, later carrying a hazy mental picture which *represents* any of the group, then learning and using one name. This name, suggesting the essential features of an object, helps to fix these in the mind, and to direct the attention to the same features in new cases which are then brought into the group already named.

This process is constantly going on. The child's groups of things called by the same name grow rapidly larger, as he recognises the same qualities in many individual instances. In one sense he generalises too widely because he is easily led away by superficial resemblances, satisfying momentary interests, but unlikely to serve any permanently useful purpose. Just in the same way the savage extends ideas, applicable only to himself, to animals and natural objects. Discrimination, the result of the increasing number of

interests considered in the last chapter, breaks the groups up and narrows the application of the name. All bricks are much the same to the baby who merely throws them about ; but, when he is old enough to build with them, he must select the same kind with more care. So with people ; as sympathy and comprehension grow, "dada" is distinguished from other men. In this sense, the child gradually learns to limit the application of his terms. In a more obvious sense the child is largely confined to the particular. His experience is small ; he has a very limited amount of material to classify, and his words refer more directly than in later life to particular things. And, since his intellectual and moral needs are as yet few, he will single few qualities out from his perceptions for notice and identification on all occasions. When he is able to remember these, they will be "embedded in the concrete" ; he will recognise and talk of "white things," and "big men," and "long roads," before "whiteness," and "size," and "distance" have any meaning for him. *Using* his materials in many ways (as in painting and drawing and measuring) makes him notice many qualities, and so supplies the beginnings for fresh recognitions and groupings. And, meanwhile, the daily extension of the child's experience brings him more material.

DEVELOPMENT OF THINKING: MEMORY AND IMAGINATION.

AFTER the child has acquired language we can understand much better than before what is passing in his mind, and can observe his progress in singling out and making combinations from his previous perceptions. His thinking is expressed in the form of judgments—assertions, that is, about a present fact in the light of past experience; he weaves it, so to speak, into the system of ideas which stand for his past experience. In the last chapter we noticed as characteristic of thinking the capacity to recognise sameness among our perceptions, the development simultaneously of the capacity to discriminate among them. The simplest judgments (those of recognition, as “dada!” “bow-wow!”) need no further comment. But obviously experiences are combined and distinguished from various points of view. Interest in the sense-perceived qualities of objects—colour, form, etc.—leads to the singling out, naming, and recognising of such qualities. Doubtless the infant’s “hot!” or “pretty!” is at first practically on a level with the judgments of recognition just mentioned, but a real advance in thinking is shown when, towards the end of the

**Judgments
of Recognition**

second year, the child begins to combine names of things and names of qualities. With the advance of generalisation this is more conspicuously seen, and the conceptions formed are put together in various ways. Thus we get what Compayré calls Judgments of Relation.¹ These include all the child's statements about the visual, tactual, and other qualities of objects, their relative position in time or space, and include also the rudimentary attempts at expressing the relation of cause and effect. The development of ideas gives more and more definiteness and range to the judgments.

**Judgments
of Relation**

It will be noticed that practical activity, construction of all kinds, gives the motive for dwelling on the qualities of size, form, colour, etc., for grouping objects as they are like or unlike in these respects, and so making those Judgments of Comparison which constitute an important section of young children's expressions of thought. *Size* is especially interesting, and some children show an intense interest in arranging materials according to it. Mr. Sully mentions a boy of five who was fond of measuring against his own body the height of the dogs he met on his walk and comparing this height with a third object, chair or yard measure.² Similarly in animal lessons children are eager to know the relative sizes of strange beasts, in spite of frequent disappointment at finding that lions and tigers are not

1. Judgments of Comparison

¹ *Later Infancy of the Child*, p. 43.

² *Studies of Childhood*, p. 72.

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so colossal after all. Thus the animal or picture is viewed with the familiar standard in the mind's eye and assigned its place accordingly in the child's groupings.

Again, curiosity and constant manipulation of objects impress connections of things upon the child and lead to an extension of the generalising process. This is seen at an early age in the interest in experiments with materials that make a noise, in the search for an object to account for shadows and reflections, and in the association of out-door things with a walk. As the child learns to talk, and to understand others, the ever-recurring "Why?" or "What?" begins. The questions no doubt often sound like caprice, mere momentary curiosity, but if one really attends to them, one sees the attempt to bring order into the world of new experiences. The child wants to know what to call things, how they are put together, who made them, and what they are for, always, of course, with the tendency to expect an answer suggestive of his own experience. In fact, if he is given such an answer bringing something apparently different into line with what he understands, *e.g.*, if he is told that the leaves get food for the plant, he turns the new thought over, and discusses it, instead of pursuing the "Why?" As a rule, it is when the answer given is irrelevant to the child's interest that he goes on with his catechism. Like primitive man, a child is intensely curious about the world of nature with its colour and movement; plants and animals, running water, clouds and winds, sun,

2. Judgments of Causation

The questioning age

moon, and stars, cause him constant speculation. In learning their names, in seeing how one thing depends upon another, in discovering some analogy between their activities and his own, he comes to comprehend them better. The half-poetic "explanations" of what puzzles a child in the world about him by suggesting human analogies—the "baby buds in their cradles," and so on—are justifiable as appealing to a real need paralleled by the anthropomorphic myths of savages.

The child's simpler questions generally lead on to the more ambitious flights of "Who made the sky?" and the whole range of juvenile theological and metaphysical speculation. It is comforting to consider that, after our inevitable admissions of ignorance on these high matters, we are still consulted as to the construction and purpose of familiar objects. Developing rather later than the inquiries about animals, etc., as Mr. Sully points out,¹ is the desire to find out how clocks, engines, guns, etc., work. Practical investigation is apt to expel the vague speculation about the making of the world, and the invariable and necessary connections examined produce a more critical spirit towards the reasons offered.

In noting the child's questions and his attempts at explanation, then, we learn the kind of Judgments of Causation of which he is capable.

Of course his connections are often curious, but when he is most mistaken it is most easy to see the workings of past experience. When an infant falls

¹ *Studies of Childhood*, p. 88.

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down he is usually more frightened than hurt; the petting he receives soothes him, but the mother kisses the injured hand or knee by way of special attention to it. Then the kiss and cure are inseparably associated, and the comforter is carefully instructed in future to kiss the right place before consolations are accepted. Again, when children grasp the idea of putting seeds or flowers in the ground to make them grow, they plant all kinds of things for that purpose. A little boy of five who had been cutting the grass down became sorry for it and very diligently covered it with earth, explaining that it would grow up again. The child's inexperience makes him grasp at any explanation of a new phenomenon that connects it with what he knows. A little girl who had been much impressed by the story of the boy who stopped the hole in the dike was terribly alarmed by seeing an overflow of water from the pipes running down the street. Convinced that a "dike" had burst, and that the whole population would be drowned, she tried to carry away the water in jugfuls, as the "hole" was too large to stop.

Judgment of the kind illustrated passes very rapidly into Inference, and when some sort of reason is offered for the inference we may fairly talk of the child's logic. Compayré says that a child does not go beyond unscientific induction, as he does not draw a general conclusion from a number of particular observations, but merely infers one fact from another.¹ The little American boy who was afraid

**Errors in
Judgments
of Causa-
tion due to
past asso-
ciations**

**Children's
Inferences**

¹ *Later Infancy of the Child*, p. 46.

his new teacher would be cross because she was small like his last teacher who had been very cross supplies a case in point.¹ As a matter of fact, however, young children not infrequently pronounce general conclusions (though the reasons for them may be insufficient).

Analogy, or resemblance in some interesting feature, is the most usual ground of the child's inferences. Compayré quotes a child's explanation that the smoke must get out of the window cracks, being "very small" like the water that slipped through the openings between his fingers.² In the eagerness to draw conclusions a child will frequently make his original statement yield several more. Thus a little boy who was very proud of his soldier's cap admitted that he was not a soldier yet, but a big man who wore a soldier's cap was a real soldier; if his father wore one he would be a real soldier, and if he wore a sailor's cap he would be a sailor, and if he wore a policemen's helmet he would be a policeman, and so on through all the occupations which he knew.

Reasoning
from
Analogy

Far from being satisfied with particular inferences, children are constantly expounding the results of their observations on what boys do as distinguished from girls, or on what big people do as distinguished from children.

Traces of:
1. In-
ductive,

Again, children from the age of three become adepts in the deductive reasoning which brings some particular case under a general maxim of the nursery. A

¹ *Studies of Childhood*, p. 74.

² *Later Infancy of the Child*, p. 47.

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little boy of four explained that it was naughty for some other children to examine sticky horse-chestnut buds: "Nurse says we mustn't sticky our fingers".

2. De-
ductive
Reasoning

Children learn to anticipate our reasons for a conclusion adverse to them, and try very ingeniously to show that the case in question is not covered by the general precepts which both we and they admit. A girl of five was urging that she was not naughty like a bad companion, Dicky. She was questioned on what constituted Dicky's badness, and explained the usual juvenile offences. But when it was hinted that these were not unknown in her case, she saw where the discussion was leading, and promptly added that Dicky was bad *all the time*. Similarly, a small girl of three who had asked for a toy in a friend's house inserted the pathetic, though glaringly inaccurate plea, "We hasn't many pretty toys in our nursery".

A child's argument often shows great acuteness in making a new case conform to one already decided. A grown-up friend having tea with a child of five said she was getting impatient to go, whereupon the little girl was reminded "of what aunty said to me when I was impatient for my frock—'Rome wasn't built in a minute'—so I say it to you, 'Rome wasn't built in a minute,' and I'm not finished my tea in a minute!" It is clear that we cannot *teach* children to reason. Allowing them to talk over their experiences, pointing out the oversights which lead to their too hasty generalisations, and endeavouring to show the real connections between things, no doubt assist greatly in

securing accurate thought ; but the actual reasoning, the bringing of new facts under the systematised ideas in which the past exists for us, must be done by each for himself.

More developed thinking, it has been seen, involves the reproduction of past experience in the form of ideas.

Memory

This Reproduction or Memory has its physical basis in the nature of the nervous system, which retains impressions made upon it. The tendencies which show themselves in instinctive movements are due to what may be called "inherited memory". Habit, again, depends on the same characteristic of the nervous system. But in the case of Instinct and Habit the effect of the past, though serving to initiate action, is not *consciously* reproduced.

Physical basis

Memory, in the usual sense, implies the revival of the past in the form of images. In the earliest days the child lacks the capacity for such revival, but after a few months the images connected with his walk are aroused at the sight of his hat, and at two years old he is able to talk freely about recent doings.

Memory proper involves :

1. Images

Whether the images representing past events depend upon the exercise of the same parts of the brain as were concerned in the original sensations, as Professor James holds,¹ or upon a further growth of brain structure, their appearance must be gradual, for on the former theory their centres are excited from within

¹ *Principles of Psychology*, vol. ii., pp. 72-75.

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(by currents from other centres actually receiving sensations), and connections among the brain centres are of gradual development.

The existence of images is not enough to constitute
2. "Past" memory; the images must have the element
feeling of *pastness* and must refer to *our* experience.

The child's conception of Time is of slow growth,
How the feeling of past time develops and is for some years very limited and confused. The nucleus of the "time sense" is in what we call the actual present. The "present moment" has a certain duration; we perceive a number of strokes of the pendulum, or bell, or any other short series as a whole in which we are conscious of a part *just gone*, and of a part *still to come*. We seem to feel the movement of attention. The waning portion of the series has its peculiar feeling which gives us the notion of *past*, and the rising portion similarly gives us that of *future*. Of course the child does not attend to these distinctions; but practical considerations impress upon him the
Future more prominent at first difference in feeling between the *now* and the *not yet*, when he is waiting to go out, or for a meal. The forward-straining of the child's attention is a striking feature of his life. But he is obliged to dwell on the distinction between the *now* and the *no more* when pleasant things come to an end, and he is summoned from play to bed.
Child's dependence on precedents And, as the child grows older, he uses the past more and more as a guide to what he may expect in the future. It is when he is likely to be disappointed of a hoped-for pleasure

that he turns to precedents and reminds his elders of what they let him do yesterday.

A child's disappointments have a peculiar poignancy from this blind trust in the repetition of the past. He indeed feels "that a sorrow's crown of sorrow is remembering happier things". While past, present, and future soon become distinguished in the events of the day, the range is short for past and future.

Images of past events are located in that direction because of the element of *past feeling* attaching to them, but a small child of three or four has no capacity to arrange them as we do in a regular series backwards from the present moment. He jumbles together events of very different periods, and uses "yesterday" or "a long time ago" often very loosely. Certain landmarks stand out as a help to more exact location—his birthday, Christmas, when he was in the country. The changes of the seasons as affecting the trees and flowers do much from year to year to impress some regularity among his fleeting experiences, and, of course, supply a means of reference.

Child's
concep-
tion of
time
limited
and con-
fused

It is quaint to hear our phrases about lapse of time applied by small children in their own case. "A long time ago, when I was a little boy," a child of five will often say. "It's years since I was in a place of worship," observed a little girl of six.

Mr. Sully remarks upon the child's tendency to regard everything as concrete, illustrated by the question "Where do all the days go to?"¹

¹ *Studies of Childhood*, p. 76.

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To return to Memory, it has already been stated that the images, tinged with the feeling of *pastness*, belong to *our* past experience, and are associated with that group of ideas and feelings which has come to be our Self. In our earliest days we have no such organised group of ideas; the more or less isolated experiences not being related to anything permanent are not recalled. Consequently we have no memory of what happened to us in those days. Sometimes one special scene or incident which has left a peculiarly deep impression is recalled, but in later years it seems more like a dream image, or some one else's report, or a memory of a memory, than a memory of our actual Self.

The conditions of Memory are of great importance to the teacher. The original impression of Memory: must be of a certain strength. Many things are forgotten because we did not attend at the time. With little children a strong appeal must be made to the senses, and the object of which we wish them to remember the appearance must have a chance of undivided attention. In this way the impression has the best chance of being *retained*.

It will be reproduced or recalled in accordance with the laws of Association.¹ The principle of Association depends upon the physical fact that when brain processes have been excited together in the past, the re-excitement of one tends

¹ A full discussion of the principle of Association will be found in James's *Principles of Psychology*, chap. xiv.

to rouse the others into activity owing to the growth of paths of connection in the brain.

Thus, things connected in place and time are associated so that whatever reinstates one reinstates the others. The sight of a face, for example, brings back in memory the circumstances in which it was seen before. The more the different senses combine in

Association by Contiguity and its conditions :

an experience the more chance is there of its recall, for the re-excitement of any one of the senses originally concerned may bring back the whole experience. But, after a time, things have appeared in so many connections that there are all sorts of past associations which may be revived by the element presented again. The selection of one out of the various alternatives depends upon several conditions.

On the whole that associate of an experience with which it has most frequently been connected will be recalled. This is simply an example of the law of Habit. Many of the quaint mistakes of children in apprehending the meaning of words is due to their seizing on the usual signification. The child who explained "the green hill without a city wall" as "a green hill that hadn't got a city wall" was merely taking the habitual associates of the word "without," though he also knew it in its rarer association with "within".

Sometimes recency of association gives preference to the recall of a circumstance not usually connected with what now suggests it. The line of a hymn, "The scanty triumphs *grace* hath

1. Frequency

2. Recency

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won," sung by schoolboys after a match in which the famous cricketer had shown less than his expected prowess, naturally recalled the match to the exclusion of its ordinary suggestions.

Similarly special interest attaching to one combination makes its recall probable when one element is presented alone. Thus a little boy in a Sunday School class being asked who Paul was promptly referred to a noted footballer whom he greatly admired. No doubt the name Paul had been more frequently heard in connection with its scriptural bearer, but the vivid interest in the footballer caused the awakening of his image when the name was heard. In this case and the last a single impression in which various elements were combined has left such deep traces that the paths of connection in the brain between them are, so to speak, more open than any others.

The particular mood on any occasion exercises its influence on the images which a present experience will recall. As Professor James puts it, those associates which have "emotional congruity" with the present will be revived. This is evident even in the case of a small child who, when annoyed, is apt to remember all our offences against him. A little girl of five in an irritable and critical mood refused to be enlivened by conversation about a favourite companion, asserting "She's cruel! she wouldn't fasten my shoes yesterday".

When certain qualities in things are singled out for special attention they may suggest other things quite

different except in possessing these same qualities. The most obvious qualities of size, shape, and colour in the objects a child notices remind him constantly of other objects similar in these respects—he calls a globe a big ball ; the willow catkins remind him of “ pussies ” ; his dinner is always suggesting something similar in colour, and the gravy becomes the mud, and the potatoes the street pavement. When moral qualities begin to be noticed and commented on, their exhibition in members of the family is generally suggestive of the familiar characters in the fairy tales, and *vice versa*. “ That’s like Cinderella’s sisters ! ” announced a little girl on hearing some one reproved for being vain.

Associa-
tion by
Similarity

Though we have spoken of the condition of associative revival as the *presence* of one of the elements again, it is, of course, true that this may be simply a name, or a quite trivial feature, recalling a certain image which, in its turn, calls up others. But it seems clear that in the child’s case we cannot expect a long, coherent revival of past experience, one image suggesting the next, without some support from an actual presentation. Thus a child is very considerably helped in an object lesson in “ recapitulating ” if he is allowed to handle his specimen while reproducing what he has learned about it, and in retelling a story he is helped out by glancing at the pictures when his memory fails.

Depend-
ence of the
child on
some con-
crete aid
to revival

Apart from other associations, rhythm, of which the child has a keen appreciation, is a form of combina-

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tion which enables him to remember words. In this way even meaningless syllables are readily learned ; and how else could the multiplication tables have been mastered when concrete aids were not employed ? It will be noticed that something of the child's verbal accuracy in telling old stories depends on the curious sing-song rhythm into which they are apt to fall.

Another characteristic of the child's verbal reproduction is the dramatic tendency to give the intonations originally heard as well as the words, and undoubtedly a hint as to the former helps to recall the latter ; thus an indication of *how* the " Big Bear " spoke helps to recall what he said. A child who is playing at being a lady out visiting will keep up the artificial grown-up tone for an hour at a time, finding it a sort of support to the " grown-up " talk.

To secure the retention and reproduction, then, of any impression it is not enough to make it definite and emphatic when presented ; we must also endeavour to link it to the things that interest the child, to emphasise its resemblance to familiar experiences, and to make as many of the senses as possible active in apprehending it so that there may be many possibilities of its revival. Obviously this may best be done by frequent and regular presentations (for short periods) of the objects or words to be remembered and not by trying to stamp them once for all upon the mind by long and tedious examination and repetition.

When experience has supplied a number of memory images, the child becomes able to deal with them with

**Rhythm
as helping
Association**

some originality and to combine them in ways not actually experienced. This is called *productive* imagination, as distinguished from memory which is simply *reproductive*. In speaking of association by similarity, we saw that objects recall those with similar qualities independently of connection in time and place. Much of the child's pretty fancy is just this comparison between things which to the practical minds of adults are quite different. The attributing of feeling to flowers, stones, etc., carries further the personifying tendency so commonly applied to animals; and, as every reader of the *Child's Garden of Verses* knows, the wind and the shadows seem to the child mysteriously alive.¹

Imagination

Imagination as shown in fanciful comparisons

The child's play, his attempts at art, and his improvised stories show more initiative; he makes his own combinations and chooses points of resemblance to suit his purpose. It is true that in play, as Stevenson points out, a child shows a "pedestrian fancy" in requiring so many stage properties, in his perpetual "playing that he is so-and-so";² but children differ very much in this respect, and some fill out their games by improvised stories without lay figures. A small boy of four when

Original combinations of ideas

¹ Mr. Sully's section dealing with this subject in chap. i. of the *Studies of Childhood* ("The Age of Imagination") should be read, as it contains a number of the charming fancies of which every reader's experience will probably supply a specimen.

² Essay on "Child's Play".

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driving a "coach" to London meets with wild adventures from invisible lions, dragons, and cruel men, with whom the "horse" carries on conversations which he reports in an awe-struck undertone; he does not imitate the horse's neighing when this is suggested to him, but listens hard and says "He's doing it now". And he plays an elaborate game with a small sister of three in which both listen to inaudible lions roaring, and talk about saving certain mysterious persons who only appear as "they".

Two striking characteristics are apparent in the child's improvised games and stories. In
Tendency to rambling the first place there is a strong tendency to run on from one thing to another, owing to chance associations. Often what we call a vivid imagination is rather this somewhat incoherent rambling on and on, joined with the inexperience which prevents the child from knowing what is possible. A little boy of five, having drawn a duckling, drew a figure on its back; and, when asked who that was, explained that it was himself. Where was he going? To Africa. What was he going to do there? To fight the Boers. And so the story went on, new developments being suggested by the questions. But again, some children show considerable grasp of the main idea of their story. Two small boys in a Kindergarten were overheard by the teacher discussing sheep. Suddenly the younger began, "When I was a sheep!" and told a rather painful, but very clear story about being lamed, and then killed, to the awe and perplexity of the other, who urged, "But you're a *boy* now—how

could you?" The evident conviction of the story-teller suggests the other characteristic of the child's imaginative constructions—the hold they have upon the mind for the time. Undoubtedly children do in a sense distinguish these from real life; in the presence of their elders, at any rate, they romance with an obvious twinkle over the make-believe; moreover, the peculiar interest they show in anything which connects a story with their ordinary life seems to indicate a feeling for matter of fact. But it will be noticed that children's make-believe is more serious when they are alone. As Stevenson has remarked, the child's eagerness to know whether a thing really happened is not evidence of a capacity to distinguish between truth and imagination, but a desire to learn the probability of its happening again to him.¹ And in their love of concrete guarantees of a marvel, children are as blindly credulous as their far-off ancestors. A little girl who wanted to believe in goblins was assured of their existence for years after hearing Dickens' story of "Gabriel Grub" in *Pickwick Papers*, from the reference at the beginning to "this part of the country". And a little boy of ten was certain that there were fairies because he had "seen the fairy tables in a fairy ring near Dublin".

It is when imaginary objects and situations are of the terrifying order that we see most clearly their tyrannous hold on the child's mind. The blind fear of imaginary presences is one of the most painful features of child life. It is

**Vividness
of the
child's
images**

**Imagina-
tion and
fear**

¹ Essay on "Child's Play".

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of little use to prohibit alarming stories when the shadows and the wind, ugly faces seen in the street, casual phrases and anecdotes from grown-up conversation, produce such haunting terrors. Moreover, partly because the Self is not yet clearly distinguished from others, the child is not helped by the reflection that nothing unpleasant can happen to *him*. The ugly images simply fill the field of consciousness; and, as with us in dreams, there is no critical intelligence to fortify him. A child who sees with Crusoe's eyes the savages on the beach at their awful meal carries the picture about with him, as it were. Before the systematised ideas connected with our practical and intellectual interests have become co-ordinated (involving the highest brain development) it is natural that mental activity tends to concentrate itself in peculiarly vivid mental pictures. The child's very leisure and disinterested curiosity expose him to these absorbing images; he has nothing to draw off his attention to more pressing matters, no organised paths for the discharge of mental activity into safer outlets. The practical wisdom of occupying a child with healthy interests of the constructive type, of keeping from sensitive children the more obviously dangerous stories, etc., and of giving the solace of one's presence on occasion, is obvious.

The nature of the child's imagination bears on **Children's** another practical question. The lies of **lies** small children merit and have received, especially in America, careful study. Some are clearly due to fear, and in these cases are not as a

rule very imaginative, except in the odd subterfuges by which the child evades rebuke, as when she calls her mother "naughty!" and then after a pause adds "dolly".

Others often show the tendency to mingle fragments of dreams with narration of actual experiences. The dream sometimes fits in so well! Again, when so much of the child's life is spent in deliberate make-believe for his own amusement, can we wonder that he sometimes answers our questions with a mixture of fact and fiction? A little boy, who had been playing with a brass lizard for a dragon one night, announced the next day that it came up to bed to see him and "kissed him good-night". And a small girl of three told some visitors a long story about buying her brooch at a "bwoochman's". When reminded by her brother that it was given to her at a friend's house, she rejoined calmly, "I know, but I *pvetend* I got it at a bwoochman's!"

The force of example and practice in giving a correct account of what has happened, as Dr. Johnson advised,¹ are no doubt required to develop the habit of truth-telling, but blame seems absurdly out of place when a small child still in his "native cloud-land" shows no "peddling exactitude on matters of fact".²

¹ "If a thing happened at one window, and they, when relating it, say that it happened at another, do not let it pass, but instantly check them: you do not know where deviation from truth will end."

² Stevenson, Essay on "Child's Play".

GROWTH OF PERSONALITY.

If we regard the Self as a body of conscious experiences held together by memory and distinguished from the outside world, or the Not-self, by what has been called their special "warmth and intimacy,"¹ it is evident that the realisation of Self must be of very gradual growth.

Not only has the new-born infant "never thought that 'this is I,'" but he does not even clearly distinguish in sensation his own body from the objects around it. He treats his feet and fingers as foreign objects; Preyer noticed a baby of fourteen months bite his own arm.² But the insistent and continuous presence of the *organic sensations* makes a kind of central unity. These the child carries about with him; his most vivid pleasures and pains are bound up with them; interference with them is what makes a difference in his existence. These are, as it were, the core of the Self.

With the child's active explorations of his own body comes a peculiar interest in all its parts owing to the double sensation of "active and passive touch"

**The child's own body not at first distinguished from other objects :
1. Importance of the "Organic Sensations"**

¹ James, *Principles of Psychology*, vol. i., p. 331.

² *Infant Mind*, p. 145.

which he receives in the process. In no other case does he get these experiences. He soon comes to realise the difference between biting his own finger and biting other people's, and confines himself to the latter. Pain is the great teacher here ; bodily hurts remain after the cause, and are carried about with one. Hence it is the *passive* sensations of touch and temperature that have the greater "warmth and intimacy"; those which are always with us, owing to the contact of clothing, of one part of the body with another, etc., are felt to belong to "us" more certainly than the intermittent impressions of active touch. The latter, together with impressions of sight, are referred outside ourselves. In the ever-changing experiences of the mobile hand and eye, then, the child finds his "outside world".

2. Exploration of the body results in its distinction from the Not-self

One distinction must be made. His movements alone are not enough to give him the experience of something outside him. Things and persons move independently of him, and are subject to changes which have nothing to do with changes on his part. It is the visual and tactual perceptions partly independent of his movements which are "outside objects".¹ The movements themselves, being constant, and also the outcome of internal states, the perception of them enters into the Self-feeling. Repeated exercise and exploration soon bring about a consciousness of the whole body as distinguished from other objects.

¹ See the chapter on "Perception of External Reality," in Stout's *Manual of Psychology*, vol. ii., p. 321.

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Since the eye follows the hand, visual impressions of the body become co-ordinated with the touch and movement experiences. The child takes great interest in looking at his accessible members ; though how soon he is able to realise his body as a visual whole and to recognise it is not certainly known. In the first year Preyer's boy smiled at his image in the mirror ;¹ to recognise in this way implies previous perception of the greater part of the body in a general way as one object. The sight of other people and of pictures helps out this perception, and especially the mother's aid in pointing to the mirror, touching the different features, saying the baby's name meanwhile. As we know, however, the mirror image before the age of two is often taken for another child, kissed and offered toys, and one little girl was angry at seeing it wear her blue ribbons. Naturally any æsthetic appreciation of his looks is quite beyond a small child, though perhaps in the third year some interest in the possession of pretty hair or a pretty frock is not uncommon.

The child's most intimate personal possessions, and, above all, clothes, are next felt to be part of the Self. We cannot point to any definite stage at which these are " taken over," but, as perception develops, those objects which are closely connected with the body are regarded with a peculiar interest. Obviously, in the case of clothes the connection is very constant and

Other
elements
in the Self-
feeling :
1. Clothes

¹ *The Mind of the Child ; Development of the Intellect*, chap. xix., p. 198.

intimate, and the sight and feeling of them become bound up with the daily experiences of the body. As Mr. Sully remarks, a child often resents a change to an unfamiliar frock as if losing something of his personality thereby¹—the feeling is not unknown to adults. Again, just when the child's perception of colour is becoming marked, the bright colours of his clothes are an abiding attraction. The love of odd bits of adornment, especially of brightly coloured little things that the child can put on, shows a kind of primitive vanity—the emotional aspect of the Self-feeling. Similarly, the child likes to feel “big,” whether it is by mounting a chair or putting on his father's hat. As soon as clothes become connected with different wearers and different ages their importance to the child increases; the boy's rapture at being put into trousers, the girl's attempts to make a train to her dress, mark a real expansion of the Self. Clothes, however, have their drawbacks; they are a restraint, and the daily operation of having them put on is a torment. Still, when a small girl mentions with complacency her eight frocks she merely illustrates the general rule that the Self-feeling grows with habitual perceptions belonging to our possessions.

The child's feeling towards his favourite toys is another illustration of the growth. Those that he carries about everywhere and takes to bed at night are not to be lightly touched by any one else. A group of familiar perceptions and feelings belongs to them, and the Self is the poorer if

2. Other
possession
sions

¹ *Studies of Childhood*, p. 202.

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these are disturbed. The wrench of parting with his possessions, the pang at seeing them injured, are, in the fullest sense, hurts to the child's Self. Just in the same way the craftsman is bound up with his favourite tools, the cricketer with his bat, the hero with his sword.

Meanwhile, as these intimate perceptions and feelings are growing, the child is learning the names of things. He is taught his own name among others, and probably uses it in some form at the end of the first year. If his parents address him and refer to him always by name, and not by a pronoun, and also speak to him of themselves as "papa" and "mamma," he will naturally use his name and not "I" or "me" for self-reference for a longer time than if he hears the pronouns used frequently. When, usually towards the end of the second year, he begins to use the "I" or "me," sometimes adding his own name, it is not that an entirely new feeling of his individuality emerges, though no doubt this mode of reference (which can only be used by himself) helps to make the distinction between the Self and the Not-self more definite. The child attaches great importance to the naming of things as "mine"; other people's things, however interesting, seem more remote. As Preyer says, "By means of speech the *conceptual* distinction of the I, the self, the mine is first made exact; the development, not the origin, of the 'I' feeling is simply favoured".¹

It should be noticed that the child takes names

¹ *Development of the Intellect*, p. 203.

very seriously. One must by no means address him by his own name when he is playing at being some one else. On the other hand one must use discretion in taking liberties with his name. A child of three allowed herself to be carried off from her mother to play at being some one else's little girl, but when called by another name instead of her own she raised a storm of opposition and regarded the offender with suspicion for the rest of the evening. "Not a duck—*Hilda*," she insisted on another occasion. Every one is familiar with the child's resentment when some grown-up relative addresses him by his formal full name instead of the familiar abbreviation of the home; the former seems to suggest a different being from his every-day self.

The development of memory extends the child's view of what constitutes himself; he has images of this same body in other circumstances; its former pleasures and pains are to some extent revived. He will talk about his more active experiences of yesterday by the time he is two years old; but even at the age of four or five he cannot look back very far, though certain events, such as donkey-rides and visits to the photographer's in which his small person figured prominently, stand out even after the lapse of a year or two. For the most part, however, he has the hazy impression of himself as stretching back into the past. So much of his life is a regulated repetition that the vague feeling of being some one who "always does" certain things is a natural result.

**Effect of
Memory in
expanding the
Self**

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So far the Self-feeling considered has been connected with the body, in its permanent sensations, in its activity as the means of perception, and as *the* most interesting and constant perception itself, and in widening its most habitual and interesting accompaniments. Memory has been thought of as giving extent to this feeling, and the use of the name and the first personal pronouns as giving it definiteness. Association with those around him is needed to make the child distinguish mental and moral qualities, and think of himself as possessing them.

At first persons and things are not distinguished clearly; the child treats them in the same way; but Baldwin has shown in detail that persons as moving, incalculable objects chiefly instrumental in giving pleasure or removing pain—or *vice versa*—soon become by far the more important.¹ Experience brings some sort of order into their characteristics. Within certain limits the child's elders behave in a fixed way, and demand certain settled modes of action from him. He is called good if he conforms, naughty if he does not. When there are other children in the family, these distinctions are the more impressed upon him by constant object lessons in the connection of conduct with praise and blame. Further, especially in his relations with his brothers and sisters, a child is continually experiencing in the feelings of sympathy or pugnacity the importance of their conduct to him, and endeavours to find terms

¹ *Mental Development in the Child and the Race*, p. 335.

for it. He becomes critic in his turn, and applies the standard imposed on himself to others. If he is more apt to begin by calling a brother or sister "naughty" than "good," we must remember that breaches of order are more striking than regularity. Children's comments on one another are often interesting, if pharisaic, as showing what personal qualities they notice. "She *never* says she's sorry," reflected a boy of four on his younger sister, with a mixture of envy and condemnation. In judgments of this sort we see the dawning sense of the difference between other selves and ours in *character*.

Imitation of others is the chief means of expansion of the Self, as soon as the child has realised the importance of persons. As long as his interesting and powerful elders are simply contemplated, they are only dimly understood as something external to the child—"personal projects," to use Professor Baldwin's term. But, as we have seen, the child is impelled to imitate them, and this means action, the feeling of himself as doing certain things, the perception of himself as "subject". In this way the child learns his powers, regards himself as an agent in bringing about certain results. And, knowing now himself how this feels, he understands the persons imitated, can read his feelings into them—they have become his "ejects," similar selves to his own, thrown out as it were, or inferred from his own. Henceforward there is a rapid and constant growth of the Self. New elements are acquired by imitation of others; clearer realisation of other selves

Influence
of Imita-
tion

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gives the child a more distinct idea of what his own is.

In a sense the conformity to law demanded by the child's parents, if their own conduct shows them also bound by it, develops a worthy Self. In so far as the child acts out the rules of daily life as required, he gets the feeling of doing what is expected of him, and to some extent understands his elders' view of what "ought" means. The "Wasn't I good?" respecting these occasions is really rather to be welcomed than snubbed as conceit, for it shows the child reflecting on his conduct, following an example intelligently, and appropriating the resulting feelings as his own.

The more active way of entering into his elders' point of view is seen in the child's taking his turn as director of younger brothers and sisters, animals, or dolls. No doubt, when a small child wants the baby to grow bigger, "so as to obey *me*," it is the feeling of power which is looked forward to, and the small "mother" or "teacher" is sometimes a capricious tyrant. Still, an elder sister, to the regret of the younger members of the family, does commonly imbibe grown-up morals much the sooner from her frequent opportunities of representing the authorities. One great advantage of the Kindergarten is the alternation of obeying and directing by each child in the games. If

How fit he is to sway,
That can so well obey!

is true, it is also true that intelligent and willing obedience implies some experience of command,



While from his reciprocal relations with others the child is learning to regard himself as a being with regular modes of feeling from whom a settled type of conduct is required, he is also learning his powers in all those directions considered the instinctive activities. As habit fixes these into settled interests, the feeling of personality extends. He regards himself as able to do certain things—even to teach others ; at four or five he patronises his ignorant elders as to the right way to play his games, and discriminates among them respecting their fitness to enter into his interests.

Instincts
becoming
Habits
show
settled
interests

He often calls himself clever, but this only implies success in doing things ; as a little boy remarked, his father was “very clever—he can reach high things”. It is chiefly in his imitation of the characters that attract him that a child realises what it is to be “clever,” polite, brave, and so on. While acting the part of engine-driver, captain, or doctor, he will show amazing consideration for those in his charge. He naturally aspires to the finest parts when dolls are available for the less important, or when there are younger children, or complaisant elders to serve in the unheroic capacities.

Qualities
noted by a
child

But it will be noticed that the adult's distinctions of class do not concern him in the least. The policeman, the organ-grinder, the cook, are glorious beings whom he longs to imitate. Ask a number of small children what they want to be when big, and you invariably get a list of occupations visibly marked out by uniforms, special implements,

Class distinctions of
small
account

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etc., and often belonging to a humbler social class than the children's own. The impressive feats of a brother will sometimes make a sister express the intention of being a *boy* when she grows up. Some little girls always play a boy's part in their improvised dramas, choosing the same name day after day, and almost dreaming themselves into his character and prospects. Once more the child's dependence on the concrete must be noted. How much better the character is realised by "dressing up"! How much easier it is to enter into the pirate's feelings after blacking a moustache and donning a dagger!

Though a child shows himself so eager to adopt the ways of those around him, and so ready to follow precedent, there are times when he asserts his individuality most strongly by running counter to rule. Commonly towards the end of the second year, just when the child begins to grasp the fact of his own agency, his whole conduct is marked by wilfulness. This is especially the period of "contrary suggestion" discussed by Baldwin.¹ The various incentives to movement (whether word or example) produce the opposite effect to what is expected. A prohibition regularly rouses rebellion by giving the child the idea of the forbidden action, or making it more vivid and attractive. Long after this period energetic and passionate children have perverse fits. The attempt to overcome them by direct command or interdict often fails, and even when successful it is disastrous, for it leaves the memory of the struggle, and a probable desire

¹ *Mental Development in the Child and the Race*, pp. 145, 146.

for its renewal. To make no inconsiderate demands, to *expect* compliance with reasonable ones, suggesting surprise at omissions, and doubt of the young rebel's capacity to do the thing, are often more effectual. The sudden contrariness of a younger child in games is a source of trial to the lordly elder brother, and much may be learned from the tact with which he skilfully alters the details of his play, and "pretends" that the interruption is really part of what he intended.

Even docile and law-abiding children sometimes strain against authority, not so much in refusing to do what they ought to do, as in experimenting in what they ought not to do. This is hardly intentional naughtiness; it is almost intellectual curiosity, a desire to eat the fruit of the Tree of Knowledge. The child wants to know how it feels to say the things he must not breathe, and feels a thrill of daring freedom while making the trial. Thus a little girl of seven who had had the Second Commandment carefully explained to her, deliberately said a prayer to a statuette of Pandora, and afterwards made attempts to emulate the witches she had read of in summoning Satan. The secrecy of these exploits does not imply so much fear of punishment, as pleasure in having, out of the eye of authority, private possibilities of unusual conduct.

The wilfulness of children is, however, less strong than the sympathy which unites them to those about them. In fact, in spite of sporadic assertions of Self, they cannot stand alone. Just because the limits of their personality are as yet so vague, it is terrible to

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be physically or morally isolated for any time from the other members of the family. Even while the rebellious boy is asserting to a younger brother his intention of going away and *never* coming back again to his unkind family, he is apt to move himself almost to tears at the prospect of his loneliness, and to lavish unusual affection on his hearer as a compensation. A child of four or five, when "sorry," certainly feels the difference between the Self of a perverse outburst and the normal Self, and anything but a temporary breach with what is habitually required of him gives him uneasiness amounting to an incipient conscience.

The development of the feelings, habitual tendencies, and memories which constitute the child's Self makes it possible for him to *will* in the fullest sense. Voluntary action is of gradual growth.

To recapitulate what has been said before, the first reflex and instinctive movements produce sensations of the motor (or kinæsthetic) type which have a regulating influence on future movements. The attention, that is, has been aroused, and an effect produced on the motor area of the brain, accompanied with pleasurable or painful feelings. The higher motor centres then inhibit the repetition of movements associated with painful feelings in the past, and those movements are selected for repetition which are associated with pleasant feelings. In the

Counter-acted by sympathy and lack of self-dependence

Will—its gradual development from:

1. Reflex and instinctive action—sometimes inhibited, sometimes encouraged

clash of two instincts like acquisitiveness and sympathy (when a child, for instance, is divided between the impulse to keep and the impulse to share), there is a hesitation, not amounting to deliberate calculation, but giving the idea of being praised for kindness a chance to strengthen the generous inclination.

Again, the tendency to imitate is instinctive, but when the child enters on the "try, try again" stage, he has an end in view, and is not satisfied with unsuccessful attempts.¹ When learning to talk, he pronounces a word wrongly; two impulses are then present, one to go on repeating the mistake which is not yielded to, because the memory of the copy stimulates him to another attempt. This is illustrated constantly in our struggles with the pronunciation of a foreign language. The *sense of effort* is felt owing to the two conflicting tendencies. Success depends on the predominance of the "copy"; if the word is repeated again distinctly for the child he probably gets it right. Of course he only goes on trying as long as he is in the mood; when he is tired or out of temper with the teacher the attempts cease.

As we have seen, it is the interesting admirable characters of the child's world who are imitated; since their activities are a permanent attraction, he will show here the most strenuous efforts to copy correctly. This is of great importance to the teacher. It is not enough to

2. Imitation becoming more deliberate

Emotional aspect of imitation

¹ See the account of "Persistent Imitation" in *Mental Development in the Child and the Race*, chap. xiii.

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show how things are done, trusting to the child's general tendency to imitate. As soon as difficulties arise from the clash with old habits, etc., the stimulus of desire to be like the teacher is most valuable. A small boy is not easily discouraged from imitating his big brother, who is attractive *whatever* he does. Here the ideas of certain actions have a strong emotional element which leads to the anticipation of carrying them out. Especially after success as the result of many trials does the child get the sense of mastery which makes his learning to walk or to speak a series of triumphs. The advance of memory makes possible imitation of past performances of the child's own or of actions noticed on his walks. Distinct realisation of the end becomes the guiding principle. Verbal suggestions on the part of his elders giving him the desire of behaving "like a man" may now prevail over the impulse to cry at an accident.

From these considerations we see that voluntary action implies first an idea of the end aimed at ; second a feeling of desire for this end ; and also that in the struggle between two conflicting tendencies attention is most active and the child obtains the keenest sense of his own agency. The Self implies settled modes of feeling and doing. The example and regulation of his parents guide the child's volitions into consistency and order. Thus a co-ordinated group of ideas and habits of action influences every new suggestion of action. If the latter harmonises with the normal Self, it is felt to be one's

Will implies :

1. Idea of end

2. Desire to secure it

3. Conception of Oneself as acting

own when carried out; if it is the outcome of an isolated impulse it is either rejected, or, if adopted, scarcely owned when reflected on, and even wondered at. Obviously, in a child under seven, the process of co-ordination is very incomplete; but even in him a certain amount of self-control is shown, and a temptation to immediate gratification is resisted, because "mother doesn't let me"; or in the other direction the idea of himself as "the biggest" makes a child brave a difficulty on behalf of his juniors.

When consciousness is aroused in sensation, perception, or ideas, and their emotional and active accompaniments, attention is being shown. Attention may be thought of in various ways, as awareness of mental activity, as the physical adjustments (strain in the eyes and other sense organs, alterations in the breathing and circulation, and so on) which take place in any heightened state of consciousness, but its characteristic as the concentration of mental energy on some one perception or idea is a familiar fact. While a certain amount of attention exists wherever there is consciousness, it may be so diffused as to be negligible. In the infant's case a strong stimulus in the shape of some disturbance of the organic sensations, or a loud sound, bright light, or rapid movement, is required to produce vivid consciousness. Only in such instances is attention thoroughly awakened. As the instincts show themselves, whatever stimulus calls them forth gains attention. So far, however, the

**Voluntary
Attention
(the inner
aspect of
Will)**

**Attention:
1. At first
dependent
on sense
stimulus
and soon
distracted**

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child is passive, dependent on the external stimulus, giving attention suddenly, without forethought when it appears, and easily distracted.

Attention is prolonged when an instinct cannot be
2. Aroused immediately gratified, as when the child
by an idea grasps at a bright object beyond its reach,
and pro- the sight stimulus remaining as an impetus
longed to further effort. This is seen more distinctly in the persistent attempts at imitation previously noted. The later imitations of something remembered imply close attention to an idea. Now that the child has an end in view and is able to occupy himself with processes which would be tedious unless they were felt to lead to the realisation of that end his attention is strictly *voluntary*. In fact voluntary attention is simply will, the holding of an idea in clear consciousness, until it is realised through action. The movements themselves follow, as it were, mechanically. It will be remembered that an idea in order to be thus held in view must have an emotional value, as having a place among the instinctive and habitual interests. It must excite desire, and promise to satisfy it. The child must look forward to the idea's becoming actuality by his efforts. A good example of the voluntary attention shown by a child is seen in his building operations. He shows remarkable patience and concentration in trying to erect such a castle as he has watched some one make for him ; the details of laying brick upon brick are not always interesting ; parts fall down, and have to be painfully replaced ; but the idea of the completed castle keeps the architect attentive,

and he perseveres. Just the same patience and close attention are seen in the game of hide-and-seek; the child who is seeking is alert to the slightest traces of the one who is hiding, listening for the sound of breathing, and kept active all the time by the idea of success.

Voluntary attention is often called *indirect* because it is not given to what is interesting in itself, but is merely a means to a desired end. So, in the cases noted above, the child may be said to *attend* indirectly to the uninteresting details of his castle, or to his hidden companion's footprints or breathing. Later he may attend to a mathematical calculation in order to make part of a machine, or like Sherlock Holmes, to varieties of tobacco ash with a view to tracking criminals—but to call his attention indirect is to assume a somewhat artificial division. The means may appear dull to us, but in the child the idea of the end colours the whole process with its own attractiveness. (It is true that children of six or seven will sometimes deliberately set themselves to do unpleasant things, either to please their parents, or out of pure curiosity, or for the reaction, as in the case of a girl who frequently got out of bed and sat till she was very cold in order to feel the pleasure of getting warm again.) We are apt to take too low a view of a child's power of voluntary attention. It is obviously easy to arouse the involuntary type of attention by any strong sense stimulus, and "lessons" being regarded as outside ordinary interests, voluntary attention will be

**Voluntary
Attention,
indirect**

**Voluntary
Attention
seen in a
child's
games**

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secured only with difficulty. But in the child's games we see voluntary attention often highly developed ; ideas are attended to, desired ends are worked up to, with eagerness and concentration ; distractions and pains are disregarded, and the incidental drudgery itself is often made pleasurable from its connection with the anticipated result. Whatever, then, secures this type of attention is strengthening the will and developing the moral character.

Types of Attention Individuals vary in the relative development of the different areas of the brain connected with special functions. In some the *visual* area, in others the *auditory*, in others the *motor* area will be most developed. Perceptions and images belonging to that sphere will predominate in the individual's mental life. If he is of the *visual* type he will be most attracted by sights, will remember in visual terms, thinking of how the words in a book *look* as he recites from memory, spelling from the image of the word, dreaming in pictures. Otherwise, the *sound* or *feeling of movement* is most prominent. Every one possessing the normal senses has perceptions and, generally, imagery of all kinds, but whenever there is a marked pre-eminence of one kind, attention is most readily aroused and most intense in the direction of that.

This has been made more clear by the reaction time experiments of psychological laboratories. A signal is given in the form of a light or sound and the subject presses a button belonging to the recording apparatus as soon as he sees or hears it. By

mechanical means the time interval between signal and reaction is registered. It has been observed that some subjects react more quickly when they keep their mind fixed upon the movement to be performed—if they attend to their fingers, rather than to the anticipation of the signal, while others are merely embarrassed by thinking of the movement, only reacting promptly by keeping their mind on the idea of the signal. In this latter class, again, differences in time are observed according to the character of the signal, whether *visual* or *auditory*. Hence Professor Baldwin classifies individuals into motor or sensory types as regards attention.¹ Opportunities for actually experimenting with young children are limited, and there are obvious difficulties in the way of ascertaining what precisely was in a child's mind at the moment of reaction. But it is not difficult to distinguish roughly the two types among one's pupils. Watch a class at drill, and you will notice numerous children who can hardly wait for the signal for a moment; their muscles seem tingling with the preparation for action and they often begin too soon. They *feel themselves acting* in advance, and are impatient at having to watch others. Of course they make the most frequent mistakes; they are quickest at responding to a regular signal, but when an unusual one occurs, being prepared to act already in the accustomed way, they promptly

Experiments proving:
1. Motor images prominent in some cases of Attention

2. Visual or auditory in others

"Motor Type" among children

¹ *Story of the Mind*, chap. viii.

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go wrong. The cricketer's difficulty in learning to "watch the ball," instead of, so to speak, rehearsing his stroke beforehand, is an indication of the hold upon the mind of the imagery of previously learnt movements. The bowler finds an easy victim in the batsman who expects the usual fast ball, and is ready with the stroke he has already made three or four times in the over. Thus the "motor" child, as Baldwin points out, is easily led astray by habit. Such a child from his earliest days has been constantly active, caring little for sitting still to look at things, or to hear other people talk, always ready to turn to something more energetic. There is consequently a predominance of motor imagery in the mind, and deeply marked paths of connection between the other centres and the motor region. *Any* impression from without tends to find a speedy outlet in movement. The habitual paths carry the nervous current at once from the visual or auditory to the motor sphere, and an old movement results before a definite visual or auditory impression has had time to be clearly grasped. Speech being a form of motor activity, we find children of the motor type very talkative, bubbling over with impulsive questions, ready with hasty answers, and delighted to be "brought out" to recite or demonstrate. Sometimes, especially in the case of children accustomed only to grown-up society, lack of practice in other modes of activity turns the whole energy into speech and "fidgeting". We are apt to go to either of two extremes with such a child, to give him exclusive attention and praise, while his movements or

answers are correct, or to snub him severely when he becomes inaccurate and importunate. The former course naturally encourages his impulsiveness; the latter, accompanied as it generally is with instructions to "sit still and be quiet," leads to aimless restlessness and irritability. The more complex manual work which keeps such a child occupied in overcoming small difficulties is found beneficial. He is anxious to do things for himself, yet he *must* attend to his materials to produce a good result. Practice in oral composition, requiring careful description of what has been seen, also serves to regulate the impulsive flow of words. From games, too, the motor child learns much. He wants to show others how to do things and soon finds that this means attention to details on his part.

The sensory type, on the other hand, learns by looking and listening. He must watch a movement carefully or hear directions. Those who learn by the eye chiefly, the visual type, are the more common, but the auditory type may be found in children who are intensely fond of singing, whose verbal memory is unusually good, and who are helped in remembering a story not so much by pictures as by hearing a phrase. In both cases the impression made on eye or ear is distinct. The child dwells upon it, and is fond of seeing pictures or hearing stories and songs without taking an active part himself. In school he is apt to sit watching others exert themselves. He is often paralysed at the thought of coming out to *do* something, finding it hard to imagine himself acting, but easy to picture himself out there alone, or to hear

The
"Sensory
Type"

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his own voice by itself. Such a child is frequently "afraid of the sound of his own voice". In games he does not like to try anything new, and leaves the active parts to others. He frequently broods over things, and is considered unsympathetic or unforgiving compared with the motor child who flings himself into new relations so easily. What is wanted is the setting up of associations of expressive movement with the impressions of sight and sound. One must be content to accomplish this gradually. The companionship of the lively, impulsive children is a great stimulus to those of the sensory type; they become familiar with ideas of movement, and begin to imitate; from invariably taking the minor part in games they may be promoted to leading in their turn, when, of course, their stiffness and lack of vigour must be ignored. The strongly visual pupil will soon show his gift for drawing and colouring; and, since his work will surpass the average, he will the more readily talk about it, and perhaps endeavour to explain it in words. Drawing naturally prepares him for other manual occupations in which movement of all kinds is an incident. The auditory pupil is, of course, most readily drawn into self-expression through language and music. Practice in easy exercises, first with others, then alone, makes him find his own powers. He may develop into an excellent story-teller, and acting out a story is only a step further. The necessity for making it clear to the audience, and the greater ease of unusual movement in an assumed character, may conquer the shyness of the most passive child.

FROEBEL'S THEORY OF EDUCATION.

FROEBEL'S view of the aim and scope of education as embodied in the Kindergarten has been the inspiration of modern teachers of young children. For Froebel is the great artist in education. Finding his vocation in teaching after unsuccessful experiments in other directions, he brought to his work an enthusiasm and a critical insight which led him to examine the practice of the best educational example of his time, Pestalozzi ; to draw from it what was really valuable, and to add to it much that was original in method, based on much that was original in doctrine. Love of children, and that complete comprehension which love alone can give, were his peculiar endowment. As Diesterweg said of him, he saw "as never man saw before into the heart of the child".

Thus Froebel's theory and practice show constant interaction. From reflection on his own boyhood and observation of children he formed the views which, carried out in his educational experiments, gave fresh material for thought. To the end of his life he was a student, extending and modifying his system, learning from its results, and imparting his ideas and enthusiasm to others. Doubtless he saw the child in the light of his own philosophy, and seems at times to read more into

Froebel's
theory
and
practice

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child nature than ordinary students can see. But his direct knowledge of children kept him from forgetting their daily life and needs. In the *Education of Man* principles, observations, and practical precepts are interwoven—to the confusion of the inexperienced reader. Froebel approaches the problems of teaching from a consideration of the unity of the universe, whereas the ordinary teacher begins by knowing individual children, and is guided in his work partly by native sympathy, partly by rules embodying the experience of others. This, of course, is merely the familiar commonplace that the art of teaching (like any other art) must be known before theory can have any meaning. The combination of the two is easy with most Kindergartners, because they largely possess the gift of insight which inclines them to welcome ideas illuminating their instinctive practice. Froebel frequently points out that the “simple natural mother” unconsciously carries out all that he sets forth as necessary to the development of the infant’s powers. Yet reflection on the principles underlying our work is desirable for the sake of teacher and pupil alike, giving interest and earnestness to the one, and saving the other from capricious and arbitrary treatment.

Froebel sought to harmonise every detail of his **Froebel’s philosophy** system with his philosophy. His writings show the constant endeavour to represent his practical directions for teaching as the outcome of fundamental principles. This is seen most coherently in the first chapter of the *Education of Man*. The

reader of Wordsworth will best understand Froebel's view of the Divine Unity—

A motion and a spirit, that impels
All thinking things, all objects of all thought,
And rolls through all things.¹

The universal mind alone is real. Nature and man are its manifestations—their essence is the “Divine effluence”.

The “soul
in all
things”

Moreover, the whole creation is regarded as showing development ; nothing is final and stationary. “It is the destiny and life-work of all things to unfold their essence—to reveal God in their external and transient being.”² In particular, man has the capacity of entering consciously into the process ; the clay in the potter's hands understands the purpose for which it is fashioned. But this capacity is acquired gradually. The child at first has no thought of the matter, but by entering into relations with his fellows and by communion with Nature he learns to comprehend their life and to attune his own to it. Thus he is led to see the unifying principle in all things, and to “draw homeward to the general life”.³ Feeling himself at one with the Divine life revealed in all things, he is able, as Froebel says, “to represent consciously and freely the inner law of Divine unity”. The aim of education is to lead to this result, “to teach ways and means thereto”.

This conception may be simply illustrated from a

¹ Lines composed a few miles above Tintern Abbey.

² *Education of Man*, p. 2.

³ Matthew Arnold, *Resignation*.

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child's relations to his parents. In a sense he is one with them from the first, but he adopts their ways blindly, and is good from habit. When, from relations with other children and probably from experience of the unsatisfactoriness of breaking rules, he realises the wisdom and necessity of his parents' conduct, he can enter into their mind and co-operate in their purposes consciously and freely.

Froebel's philosophical position has an important bearing on his belief in the child's essential goodness, and his attitude towards religion. "Surely the nature of man is in itself good," he urges; and, further, "it is treason to human nature to consider it essentially bad or evil".¹ Originally the Divine principle as revealed in the human mind must be good. Consequently, Froebel is inclined to see good in the spontaneous manifestations of the child's nature in the instincts, that is, as distinguished from what he has learned from others.² Evil is something accidental or temporary, imposed upon the child as it were from without. Somehow man may in the limitations of the earthly and finite fail to recognise the Divine and infinite in himself, and may prevent others from doing so. According to Froebel this is rather a kind of ignorance than original depravity. "The only and infallible remedy for counteracting any shortcoming and even wickedness is to

**Froebel's
belief in
the child's
essential
goodness**

¹ *Education of Man*, p. 120.

² The distinction is not final since the instincts themselves are simply an inheritance, though it may be held they have a natural priority over the less stable examples and precepts of instructors.

find the originally good source, the originally good side of the human being that has been repressed, disturbed, or misled into the shortcoming, and then to foster, build up, and properly guide this good side."¹ Froebel by no means ignores the existence of children's faults. He gives a formidable list of sins—"stubbornness, obstinacy, supineness, mental and physical indolence, sensuality, vanity and self-conceit" constituting only half of them. But these he attributes to lack of wisdom of their elders in neglecting to give scope for development in some directions, and in arbitrarily interfering in others. The egotism and unfriendliness of later boyhood may be due to absence of sympathy in the home, while the mischievous pranks resulting from experimental curiosity (stone-throwing for example) are *made* bad by the educator who attributes motives and incentives as yet unknown to the boy. And in other cases parents fail to recognise in the child's faults the very traits learned from themselves.

A good deal is certainly to be said for the view that where children and their elders come into collision the elders are the more often wrong, adult wisdom being rarer than childhood's instinctive knowledge of its own needs. But besides the failings of parents and teachers, health and heredity must obviously be taken into account when deciding the cause of childish faults.

While showing an intensely religious spirit in all his writings, Froebel finds in the closest human relationships and in Nature means of access to the

¹ *Education of Man*, p. 121.

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Divine. "Particularly in parental and spiritual human relations there are mirrored the relations between the Divine and human, between God and man."¹ Genuine parental and filial relations are the "first condition, the only key for the recognition and apprehension of the relations of God to man and of man to God".² Again, nature as a manifestation of God reveals the Divine spirit, and intercourse with nature may become, as with Wordsworth, essentially religious. "The colossal remains of shattered mountains and mountain chains speak of the greatness of the spirit of God ; and even man is encouraged and lifts himself up by them, feeling within himself the same spirit and power."³ The whole of life, regarded in Froebel's spirit, is religion. More especially, however, in his attitude towards Nature is the outcome of his philosophy seen.

When we ask *how* the individual becomes conscious of his unity with the Divine, we meet with Froebel's conception of development illustrated by the famous plant analogy. The mind or soul of each human being is regarded as a germ, an undifferentiated unity, with power to develop, under certain conditions, different functions working together to one end, showing a "unity in diversity" or individuality. At first there is no clear consciousness, "even the child and the outer world merge into each other"; the unfolding of the different powers

**Froebel's
concep-
tion of de-
velopment:
Analogy
between
the child's
mind and
the plant**

¹ *Education of Man*, p. 144.

² *Id.*, p. 145.

³ *Id.*, p. 157.

is accompanied with a growth in consciousness of personality.

The mode of development is illustrated by the parallel development of the race, but most light is thrown on it by Froebel's constant allusion to the growth of the plant. "The clear unfolding of their inner life" makes plants, especially trees, the best teachers, for in them we see symbolised the necessary steps in the human being's development. The analogy is a significant one in many ways. The infant's mind, like the germ of the plant, is relatively simple; it has latent powers which are gradually put forth under favouring conditions; it becomes more and more complex in its functions, and these appear in a certain fixed order like the different periods in the plant's life. Dependent like the plant on assimilating food from without, the child's mind can take in only what is suited to its nature and stage of growth. Above all, it is a living thing, not passive like the wax or paper to which it has been compared, but showing its own activity in dealing with its experiences, selecting and combining, as the plant draws from the air and water just the elements which are necessary to build up its living material.

The plant, however, is only a metaphor. George Eliot comments on the confusion resulting from our use of metaphors in education, and hits upon their weakness in the remark: "It was doubtless an ingenious idea to call the camel the ship of the desert, but it would hardly lead one far in

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training that useful beast".¹ So, suggestive as the plant metaphor is as to the right point of view respecting the child's mind, it does not give any direct guidance to the inquirer who wishes to know what powers the child has, and how they are to be provided for. Is the teacher, as Professor Adams puts it, to be "content to take his place as a humble under-gardener and watch with interest and admiration the development of John"?² Obviously, since the child is a higher form of organic life than the plant, his needs are more complex; he is modified by more influences from without, and in subtler ways. Doubtless, as the critics of Froebel point out, the "germ-soul" has no power of self-development apart from the education of experience and intercourse; continuing to use the plant metaphor, we must, in fact, regard the sympathy and knowledge given by parents and teachers as sunshine and soil.

There is a distinct advantage educationally in this comparison. Children are in some ways misleadingly like their elders; they can adapt themselves to our words and ways before they are old enough to understand them, and we are apt to expect prematurely what can only come with gradual growth (a sense of honour, distinct religious feeling, and so on). As Froebel observes: "We grant space and time to young plants and animals, because we know that in accordance with the laws that live in them they will develop properly and grow well . . . but the young human being is looked upon as a piece of wax, a

¹ *The Mill on the Floss*.

² *Herbartian Psychology*, p. 41.

lump of clay, which man can mould into what he pleases".¹

Increase in complexity, definite stages in development, and self-active growth are, then, what Froebel looks for in the child no less than in the plant.

The second and third chapters of the *Education of Man* endeavour to trace these characteristics in actual observation. Froebel, it must be remembered, is writing before the days of scientific psychology. He does not, like Preyer, attempt detailed and systematic child study. Nevertheless, we are given a fairly full account of the early phases of child life with suggestions as to suitable treatment.

Child's
mental
develop-
ment
traced

We begin with the stage of sensation. "At first the external world comes out of its void— as it were in misty formless indistinctness, in chaotic confusion—even the child and the outer world merge into each other."² By putting forth his own powers (in active movement), and obtaining certain results, he is "making the internal external"; external things at the same time are being distinguished, "becoming internal" in the form of perceptions. "Every external object comes to man with the invitation to determine its nature and relationships. For this he has his senses, the organs that enable him to meet that invitation."³ The account given of the development of the senses is somewhat rough and misleading, sight and hearing being specially men-

Sensation

¹ *Education of Man*, p. 8.

² *Id.*, p. 40.

³ *Id.*, p. 42.

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tioned, but the priority given to the latter. More characteristic is the stress laid on the child's **Movement** movements, which, with the advancing development of the senses, "simultaneously and symmetrically" appear. Though at first movements are made merely for the sake of exercise and with no results consciously in view, they require watching and guiding to prevent bad habits.

When from this exercise, and from the activity of the other senses, the child has some control of his body and is able to express definite wants, he is showing real "self-activity". **Movement and Perception** The appearance of language marks this stage clearly for Froebel, though, as we have seen, self-expression in the form of cries and gestures comes before language. Now the correct naming of things becomes of importance, for the careful use of names implies clear perception.

At the same time the child is becoming acquainted with objects and persons in his play. **Play** "Play," says Froebel, "is the highest phase of child-development at this period."¹ It is self-activity in the fullest sense. Behind the constant movement is the inner necessity or impulse to represent ideas and feelings in outer form ; also to gain fresh ideas by fresh experience in imitating interesting activities. There is a continual interaction between the giving out and the taking in. Moreover, the child throws his whole self into his play ; perception, memory, and emotion are all concerned ; steady attention is given to an idea

¹ *Education of Man*, p. 54.

until it becomes reality by means of the self-activity. It is in play therefore that will is most obviously developed. Writers before Froebel saw the importance of play: Plato more than two thousand years before dwelt on its influence in bringing about willing conformity to law. The special distinction of Froebel is that he tried to systematise it, to bring home to parents and teachers its meaning, to select or invent games which exercise various powers of mind and body, and to apply the ever-present impulse to whatever is to be taught. The child's serious occupation is play; he does not, strictly speaking, *work* at what has no relation to his games and stories; he is simply puzzled or indifferent. The aim of Froebel, to make the child learn through play, is condemned sometimes as spoiling the spontaneity of play, sometimes as unfitting for serious work. But Froebel was wiser than his censors. He did not divide life between pleasant play and unpleasant work; he showed rather how play could be made to produce the benefits of work, and work to acquire the interest of play.

After discussing at length the way in which the mother may develop the senses, by helping the child to explore his body and exercise his limbs, Froebel treats, quite informally and discursively, of the various instincts—curiosity, the collecting and constructive tendencies, and imitation—lamenting that these are so often thwarted rather than fostered. After speaking of children's desire to understand and to imitate the work of their parents he dwells on

**Training
of the
senses**

**Froebel's
treatment
of the
instinctive
activities**

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the importance of forming early habits of industry by letting them do their small part in the business of the family. In this connection occurs the famous exhortation, "Let us live with our children".¹ In many cases the parent or teacher may have had his own instincts checked in some of the directions in which the child reaches out so eagerly. "We are dull, our surroundings are dull to us;"² but we can learn much by becoming our children's companions. With them we can go out again on the voyage of discovery, perhaps cut short in our youth, and "it may be we shall touch the Happy Isles".

Froebel devotes two chapters of the *Education of Man* to an account of the child's later development. After the age of six or seven the powers of perception and independent movement are well grown, and the instrument of language is freely used. Consequently the boy is in a position to make systematic acquaintance with the world of things around him. He has reached the age of instruction. Activity becomes more formative; the boy knows better what result he is aiming at, and does not simply for the sake of doing, but with a particular view; he no longer simply *pretends* to be a carpenter, but wants to help his father seriously; curiosity has become love of adventure (which leads to climbing trees, exploring caves, etc.); games are more clearly the representation of ideas, and even those games in which

The boy's development: the period of instruction

Constructive tendencies more distinct

Spirit of investigation and adventure

¹ *Education of Man*, p. 89.

² *Id.*, p. 88.

physical strength is the main feature have a definite aim. Froebel points to gardening, manual work, and vigorous play as some of the means which lead "from desire to will, from will to firmness of will".¹ The search for inner connection of which much is said implies a growing interest in the causes of things, though perhaps the "longing in the heart after the unity in things" suggests the introspective Froebel, or the youthful Wordsworth, rather than the ordinary healthy boy.

While regarding the stage of boyhood as an advance on that of childhood, Froebel is careful to insist on the continuity between the two. The boy's independent movement and creative spirit grow out of the impulsive activity of the child. "The vigorous and complete development and cultivation of each successive stage depends on the vigorous, complete and characteristic development of each and all preceding stages of life."² Thus "the boy has not become a boy . . . by reaching a certain age, but only by having lived through childhood . . . true to the requirements of his mind, his feelings, and his body".³ Yet how often even by adults do we hear a child blamed for not being "a real boy" when the probable reason is a delicate or lonely childhood in which many-sided activity was impossible.

After indicating the main characteristics of the child's development, Froebel turns to the function of education as meeting his various needs. The child is to be led "to the

Continuity
of growth

Three
directions
of educa-
tion

¹ *Education of Man*, p. 139.

² *Id.*, p. 28.

³ *Id.*, p. 29.

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knowledge of himself in all his relations, and thus to the knowledge of man as such ; to the knowledge of God . . . the source of his being and of the being of all things ; and to the knowledge of Nature and the outer world as proceeding from the Eternal Spirit, and depending thereon".¹ God, Nature, and Man—education is concerned with all of these. Froebel's philosophy asserts their ultimate unity ; and he has noted in the child's natural tendencies the necessity for understanding his relations to each.

Consistently with his view of the undifferentiated "germ-soul," Froebel regards the different needs as at first not clearly distinguished from one another. "The child's life in and with himself, his family, Nature, and God, is as yet a unit. Thus at this age the child can scarcely tell which is to him dearer—the flowers, or his joy about them, or the joy he gives to the mother when he brings or shows them to her, or the vague presentiment of the dear Giver of them."² This comes later by a process of analysis. The consequence is that education finds at starting a vaguely apprehended whole, the different elements of which may be afterwards separated.

Thus, in the case of religious teaching (which Froebel discusses first) the educator finds in the boy's wonder and aspiration in the presence of Nature—in his search for the hidden causes of things and for their connection with his own life—the dim begin-

**Indistin-
guishable
at first**

**Distinc-
tions ap-
pearing in
boyhood :
1. Re-
ligion**

¹ *Education of Man*, p. 138.

² *Id.*, p. 56.

nings of *religious* feeling, as distinguished from other feelings. This is suggested by Wordsworth also :—

Thus while the days flew by, and years passed on,
From Nature and her over-flowing soul
I had received so much that all my thoughts
Were steeped in feeling ; I was only then
Contented, when with bliss ineffable
I felt the sentiment of Being spread
O'er all that moves and all that seemeth still.¹

The natural reverence, together with the feelings aroused by true parental and filial relations, enables the child to enter into the spirit of the Christian religion. We cannot, as Froebel says, have an "insight into the Divine" while leaving "unheeded the human relations that lead to such insight".² Education should be concerned not with dogmas, but with bringing into clearness the spiritual aspects of the child's life. But the "memorising of religious sayings" is advocated as giving expression to thoughts and feelings without definite form, at first a mere "intuition—something that uplifts our being and fills the soul".³ The simple prayer and praise taught to young children are, as Froebel says, a language for certain feelings which might "vanish in themselves for lack of expression".

The largest and most characteristic section of the first part of the *Education of Man* is given to the consideration of how the child may best be brought to understand the different forms of Nature and their ultimate unity. Froebel, it

2. Knowledge of Nature

¹ *Prelude*, bk. ii., ll. 396-402.

² *Education of Man*, p. 146.

³ *Id.*, p. 246.

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must be remembered, was deeply interested in science ; botany and mineralogy especially attracted him ; he had given much thought to the fundamental problems of physics, and, having a bent for mathematics, he endeavoured to apply mathematical formulæ to natural phenomena. This has an important bearing on his treatment of the study of Nature. He held it not enough that boys should be constantly out of doors, for one may live among fields and forests feeling nothing of their life and beauty. If out-door life is to have educational value—to give insight into the “soul in all things”—teachers and pupils “should go into the fields and forests together striving to receive into their hearts and minds the life and spirit of Nature,”¹ regarding the world not as a collection of individual objects without connection, but as “members of one great living organism”.² For this reason, Froebel tries to work out a connected view of the forms of inorganic and organic nature as manifestations of *force* acting through matter. “The peculiar nature and appearance, the structure and form of each thing, are always found to rest ultimately upon the nature of *force*.”³ Force acting freely and unimpeded in all directions results in a sphere as outward manifestation. “The spherical or, in general, the round form is most commonly the first and the last form of things in Nature, *e.g.*, the great heavenly bodies, such as the sun, planets and moons, water and all liquids, the air and all gases, and even the dust.”⁴ All other forms

¹ *Education of Man*, p. 164.

³ *Id.*, p. 166.

² *Id.*, p. 165.

⁴ *Id.*, p. 168.

are as it were evolved out of the sphere, which to Froebel is the symbol of unity containing every possibility of diversity. Thus it is the first of the "Gifts". Then follows a detailed study of the forms of crystals, in the development of which Froebel finds "a remarkable agreement with the development of the human mind and of the human heart".¹ The forms of plants, too, are discussed at length, Froebel reading mystic spiritual meanings into them. The number five, like Sir Thomas Browne's quincunx, represents mysterious powers, "reason, unceasing self-development, self-elevation".² To unravel science from mysticism in these speculations would be a difficult and unprofitable task. The general truth dwelt upon is that mere external observation of Nature without insight into fundamental laws is unfruitful.

The evolution of the "Gifts" depends upon the effort to introduce the child gradually to these fundamental laws, and to fix the attention on permanent qualities and relations. Their use in giving numerical and geometrical conceptions is well known. Froebel is constantly impressed with the value of mathematics. "Mathematics represents Nature as . . . she must lie in the mind of man."³

The remaining direction of the child's activity, knowledge of himself and his human relations, is discussed under the headings of Language and Art respectively. In the theoretical part of the work language and art are

Know-
ledge of
man

¹ *Education of Man*, p. 173. ² *Id.*, p. 192. ³ *Id.*, p. 209.

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considered mainly as means of self-expression, "representation of the inner life". The search for principles explaining the character of this "inner life" behind the elements of language leads Froebel into fanciful speculation on the spirituality expressed by *f* in combination with a liquid, and the force in the gutturals. He aims at discovering the origin of language in the hope that it might "cease to be merely a system of sounds and words, and would become a real living organism".¹ His mysticism leads him into regions of false philology, but he is right when he says that life and feeling in the child tend to rhythmic expression, and that the tendency should be encouraged as a preparation for the study of poetry. Writing, first in picture symbols then in conventional letters, is regarded as the natural outcome of the desire to preserve the fleeting present from oblivion. Thoughtful boys, suggests Froebel, might develop like the race "the want and the invention of pictorial and symbolic writing".² Writing and reading should not be regarded as imposed from without, but as the natural outcome of the desire to preserve and to communicate.

In art the child's inner life is most fully represented. Again, what is of importance is the spontaneous desire to express heightened feeling by song, for example, or admiration of colour

¹ *Education of Man*, p. 217.

² *Id.*, p. 223,

and interest in form by painting, drawing, and modeling. Education must satisfy the desire in order to develop the whole nature. Even when little talent is shown, the mind has at least been awakened to the possibilities of expression by art and of the appreciation of works of art later.¹ Froebel, then, contends that, in the main directions of human interest, the child reaches out himself, displaying instinctive tendencies to enter into communion with Nature, with his fellows, and with the Divine. These tendencies become clear knowledge through action. Power increases by the use of power; and that which comes through living and doing is of most value. Consequently the purpose of teaching is "to bring ever more *out* of man rather than to put more and more *into* him".² "That which we can get into man we already know . . . and every one, simply because he is a human being, will unfold and develop it out of himself in accordance with the laws of mankind."³ This is largely misleading. At the least it assumes favourable conditions among which must be counted, as Froebel in many places shows, the help of wise parents and instructors who give names to objects in the earliest years, teach stories and songs later, supply materials, and direct observations. Without this "putting in," the starved instincts will not "unfold and develop". Further, as we have seen, there is a type from which it is easy to bring out *some* expression of what is in the mind ;

Expression of feeling

Leading ideas in Froebel's view of education

Self-activity

¹ *Education of Man*, p. 228.

² *Id.*, p. 279.

³ *Id.*

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the "motor" child is always eager to express himself; what he cannot easily be brought to do is to receive *impressions* attentively. Self-activity as such may have little value owing to the lack of ideas behind it or their lack of clearness and coherency.

Of course in actual *practice* Froebel's system directs the teacher to inexhaustible material with which to make her pupils acquainted. **Material for self-activity to work upon** School and family must co-operate in order to cover the whole field. This material is set forth always as the outcome of the child's daily observation and feeling, leading to expressive games and work, but there is little attempt to bring into relation with sound psychology the period and the order in which the different aspects are to be taken up.¹ Observation is to guide us as to when children are ready for new developments of a subject. The whole attention of the teacher must be directed to these "budding points" of new branches of instruction.²

The Gifts and Games which have become most closely associated with the name of Froebel show his most systematic attempt to derive practice from fundamental principles. **The Gifts and Games** The point to consider is, does the child's mind in "unfolding its essence" by becoming conscious of its relations to Nature, man, and God, display the need for being supplied with just these aspects of life? In the case

¹ See the last section of the *Education of Man*, "The School and the Family".

² *Education of Man*, p. 255.

of the imitative games it does. Here the child is clearly realising that his fellows are of one nature with himself, by putting forth his powers in imitation of their activities. By such "self-expression" he is growing in insight into life. One may without absolute heresy doubt the predestined nature of the series of Gifts. Passing systematically from solid forms increasing in complexity to surfaces, lines, and points, they introduce the child gradually to spatial relations and enable him to understand the world around him much better than if left to haphazard observation. They are a quite unsurpassed outlet for the child's early constructive tendencies. In a sense they accompany (according to Froebel, *symbolise*) the development of the powers. The ball does, through its colour and movement, best make him attend to something outside himself. The differences in the objects of the Second Gift appear just when he is able to attend to differences. The Third Gift comes as soon as he wants to see the inside of things. But there is nothing inevitably efficacious in the use of the Gifts; the mechanical teacher may make them positively disliked. It must be remembered, however, that earnest Kindergartners, watching the results of careful use of the Gifts, are ready to admit Froebel's claims as to their value.

Whether it is possible or not to trace the details of Froebel's practice to his general principles, every teacher must feel the importance of such ideals as continuity, connectedness, and creative activity.

We have seen that the educator is to be guided

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by observation of the child's mental needs, supplying food for them as they appear, and waiting till it is assimilated before offering more. Regarding the child's mind as a living, growing thing will prevent an abrupt transition from childhood to boyhood.

No aspect of life can be considered outside the teacher's province in a view of education which regards man and Nature as both revealing the Divine, and true knowledge as man's comprehension of his relation to Nature and to God. Admitting that experience and intercourse are, as the opposite school of educationists, the Herbartians, urge, absolutely necessary, and that there can be no magical unfolding of the child's powers without them, Froebel's complementary truth remains that the individual's expression of himself is something new and valuable. We do not know what the mind's working on its experience will result in ; " what human nature is yet to develop that we do not yet know, that is not yet the property of mankind ".¹ Thus Froebel's principles emphasise the importance of constant endeavour to bring out in words and action the inner self, and so to gain clearer consciousness and power. Hence the insistence on the place of creative work, whether art which gives utterance to feeling and helps the child to grasp more firmly perceptions and memories of special interest, or industry which brings him into closer relations with the family as the outcome of the desire to help. It is when these ideas are fully considered that Froebel's well-known saying, " Education

¹ *Education of Man*, p. 279.

should necessarily be passive, following . . . not prescriptive, categorical, interfering,"¹ is best understood. If we admit a process of development with distinct characteristics in each child, the attitude of observer, waiting to learn from the tendencies that appear, is as much required from the teacher as the more general duty which Froebel calls "guarding and protecting," and which must be understood as including placing the child as far as possible in suitable conditions for the normal bodily and mental growth.

¹ *Education of Man*, p. 7.

THE KINDERGARTEN.

THE *Education of Man*, published at Keilhau in 1826, was based on experience gained at the Institute with boys rather than with infants. Froebel's later work, dealing with the education of little children from three to six or seven, is represented by the *Mutter- und Kose-Lieder*, and by the essays describing the gifts and occupations, collected by Dr. W. Lange. From the *Education of Man* itself much valuable guidance may be obtained for the training of young children, especially as regards introduction to the study of Nature and story-telling, while the chapter on "The Period of Earliest Childhood" must be read in connection with the use of the earlier gifts.

So much of the Froebelian system has been absorbed by the best Infant Schools of the present day that the question arises how far these represent the Kindergarten as understood by Froebel.

It may, therefore, be useful to summarise the Baroness von Marenholtz-Bülow's often-quoted description of a morning in the Kindergarten.¹ Work is going on in the open air under the shade of trees (for the garden is used in summer as much as possible, a large

Nature of
the Kinder-
garten as
instituted
by Froebel

¹ See *Child and Child Nature*, chap. vii.

bright airy room taking its place in winter). The younger children are playing, with the help of the teacher, one of the games from the Mother Play in which singing and movement go together. The child in the centre is leading, demonstrating how the mowers work, or the birds fly, and the circle of children around him imitate his movements. Tables are placed under an awning, and here the older children (six or seven years old, a few perhaps eight) are engaged upon the Gifts and Occupations. At one table building has been going on, and the teacher is telling a story bringing in all the different things constructed. Counting and measuring, and discussing the size and form of the bricks, have on other occasions been the exercises. At a second table the children are weaving with strips of coloured paper, straw, etc., making mats or letter-cases, some for presents for the family, others for a Christmas tree. At a third table they are occupied with paper-folding, making boats, boxes, little houses, and perhaps flowers. After half an hour of this work the children go with rakes, spades, and watering-pots to tend their small gardens, while their juniors take their places at the tables to busy themselves with stick-laying, making objects in outline (a house, a chair, a table, etc., or geometrical forms—squares, triangles, etc., or easy designs such as stars and flowers). Pets, too, are kept in the garden and tended by the children.

The morning hours only are employed, the children amusing themselves at home in the afternoon with many of the Occupations learned in the morning.

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The study of a German Kindergarten by Miss Lyschinska brings out another important characteristic. The work for each day is woven round some central thought, perhaps the story or incident from the picture book (most usually the Mother Play) with which the morning's lessons begin, or the pet or plant most prominently in the children's minds. The time which a central topic may require depends largely on the children's age. With the youngest children of three years such a topic may guide only one day's employment, but, later, the work arising from some typical plant grown in the gardens or in boxes and pots in the school-room may occupy a whole month.

Throughout the morning the relations between Kindergarten and children are much the same as in the family. The teacher enters into the Games, superintends and suggests in the Occupations, and, when telling stories and showing pictures, especially to the smallest children, gathers a small group round her, instead of treating them as a "class". There is no formality; the children converse about what they are doing; there is little sitting still except what comes unconsciously from the desire to carry out the work in hand; and in the Games and conversational lessons the children are brought into close and friendly relations, and are encouraged to talk about their home life. It is important to observe that Reading, Writing and Arithmetic have no place in the Kindergarten proper.

Obviously, then, the ideal Kindergarten must be

small. Even twenty-four children is a fairly large family for one teacher to care for. It is true that the enthusiastic infant teacher will often spend herself in sympathy towards eighty, or possibly a hundred small children, and accomplish marvels. By ingenious use of the Occupations, and taking "relays" of the children for oral lessons, some of the disadvantages of too large classes may be overcome. Still, there must necessarily be far too little movement, and great difficulty in getting the whole class into the open air for observation and Games. The family spirit does not easily flourish. Moreover, when collective instruction is given, the disabilities of the child whose senses are imperfect are enormously increased. The teacher cannot make sure that every one sees the blackboard, that every one hears her as if she were speaking to *him*, and that the child whose speech is laboured gets enough practice. Instead, too, of sitting at the table with her little community she has frequently to stand in front of the class like a drill sergeant.

The question of work need not concern us here. The Infant School does attempt with the Occupations, songs, stories and Nature **Work** study of the present day to teach the elements of Reading, Writing, and Arithmetic. Whether the former might not become more truly educational if the whole of the time were given to them, and whether the latter might not be more speedily grasped if taken up after the Infant School, will be considered later.

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The question of hours is purely practical. Doubtless school in the morning and home in the afternoon is the ideal arrangement; but when the home, owing to poverty or the employments of the mother, is unsuitable for young children, another hour or two of Games and Occupations at school in the afternoon is not a bad substitute.

Before discussing the Gifts, Occupations, and Games it should be mentioned that a rough distinction must be made between the younger and the older children in the Kindergarten. Froebel believed that the first four Gifts would occupy the child up to four years of age. To this stage also belong the simpler Occupations together with the conversation lessons and songs and Games which develop distinct articulation and command of the limbs.

The Gifts are the chief means by which the child gains insight into inorganic nature, though they may throw light on organic nature too. Their great function is to give him, as he becomes aware of the world around him, typical or normal forms. He learns to understand these in all their relations, and they serve as a standard, helping him to understand the great variety of objects whose individual peculiarities would otherwise confuse him.¹

The First Gift is a brightly coloured woollen ball. Held up by a string it is dangled before the baby's eyes, up and down, right and left, twirled around in a circle, or made to mount in spiral, rolled along the table into the box

The First Gift (as used by the baby)

¹ *Pedagogics of the Kindergarten*, p. 96.

and out again. When his attention has been caught, he puts out his hand to grasp or roll the ball himself. Meanwhile the mother gives the words describing the movements, "here, there," "up, down," "round," and so on. Then, pointing to the bird or kitten, the mother makes the ball "fly" or "jump," helping the recognition of similarity in movement. Similarity in colour is also pointed out.

Calls attention to movement

This form of the Gift precedes Kindergarten days. Gift One for the youngest children in the Kindergarten consists of six soft balls, each of a different prismatic colour. These are swung by the strings attached to them, rolled on the desk, and thrown from teacher to child, or from child to child.

Form used in the Kindergarten

The children talk about the colour of their balls, point out objects of similar colour, "match" their balls with the chalks or papers, and in this way have their sense for colour developed. Moreover, they notice, perhaps through mistakes in choosing or naming, how orange "comes *between*" red and yellow, purple *between* red and blue, etc. It is a fascinating exercise to mix, or watch the teacher mix, paint or chalk to *make* the intermediate tint. Causing the children thus to notice how two very different things are both like something intermediate which, so to speak, brings them together, exemplifies a favourite idea of Froebel's, the "Reconciliation of Opposites". It is exemplified, as to *form*, in the next Gift.

Used to help perception of colour

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The Second Gift, originally the sphere and the cube only (the cylinder was added about 1844), is meant for the child in the second half of the first year, when he begins to take active notice of his surroundings. Sphere, cube, and cylinder are made of hard wood, and are without colour. They call special attention to form, possibilities of movement, and sound. The sphere is like the ball in form, but the child squeezes it and finds that it is hard ; it makes a noise when dropped on the floor or knocked against the table. The striking difference between sphere and cube necessarily holds the eye, and makes the child dwell on *shape* for a moment. In playing with this Gift, the mother or nurse emphasises the *mobility* of the sphere which will hardly lie still, and the *steadiness* of the cube which must be pushed to move. She places the cylinder on its side when it will roll easily, then places it on end when it will not move without being pushed. Here, again, the child is getting experience of something which is like two very different things. The same fact is brought out by trying to lay one object on the top of the other. The sphere will stand on the cube, but the cube will not stand on the sphere, and each will sometimes stand on the cylinder, and sometimes not, according as the flat or round surface is uppermost. The mother, as before, talks about the Gift, and Froebel suggests a number of little rhymes which may be sung to the child during the play.

In the Kindergarten it is possible to *show* how the

cylinder and the cube are really contained in the sphere or ball, and comparisons can be made between the Gift and the objects of daily life, and thus "the child will be early led through this representation to perceive and comprehend *one* thing under *many* points of view, and *different* things under *one* reference, and the common and general in and by means of *different* individual things".¹ This is of the greatest help to clear thinking at a later stage.

Colour perception is not forgotten, for the First Gift is still used. The beginnings of counting are made in handling faces, edges, and corners, but no formal lesson on number is given. As the authors of the *Republic of Childhood* remark: "Who cares for the names of all the faces on a stupid block? but who doesn't care when it's a house and Johnnie can't find his mother, though he looks in the front door and the back door, the right-hand door, the left-hand door, the cellar door, and finally the trap-door leading to the roof?"²

The Third Gift also is intended for the baby when he reaches the second year, and shows a desire to pull things apart to see the *inside*, and with the other Gifts this will probably occupy him well into the third year. It arises out of the cube, bisected in each dimension to form eight small cubes. The mother turns the box down on the table, draws back the lid, lifts the box, and shows

**Begin-
nings of
counting**

**The Third
Gift (first
building
Gift)**

**Attention
called to
number
and posi-
tion:**

¹ *Pedagogics of the Kindergarten*, p. 99.

² *The Republic of Childhood*, "Froebel's Gifts," p. 56.

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apparently a whole cube. This the child begins to handle, and he is delighted to see it tumble to pieces. Then he tries to put it together again, and never seems to tire of the alternate taking to pieces and re-combining in different ways. One value of this Gift is that at an early age the child's pulling things to pieces is apt to become wanton destructiveness, for his power of putting together is very slight. But whenever he puts the cubes together, *something* is made which can be given a name and talked about, so that genuine constructiveness is encouraged. The Gift helps to give the conceptions of part and whole, outside and inside, for the

1. Part inside faces of the cubes composing the
- and whole larger cube are constantly being turned
2. Outside
- and inside round to the *outside*, or the top four are

arranged *outside* the other four cubes, or the whole set are built into little houses, baths, etc., with an *inside* and *outside*. A great variety of exercises is possible with

Object this Gift. When first the boxes are opened
forms or
"Forms of
Life" a child of three will most probably think of
building something—chair, table, house, or

steps. In the Kindergarten the teacher allows every one to make his own structure, and then weaves a story round all. Lack of enterprise may best be stimulated by letting the children compare results ; if the class is small a march round the tables can be managed. Or, *after* the children's attempts, the teacher may demonstrate how one form may be turned into another by a small change. It is not desirable as a general rule that the group should follow step by step something out of *her* head, when this Gift is first given,

though such an exercise may be occasionally a pleasant variety.

The objects built are what Froebel calls "forms of life". Sometimes the children will arrange the cubes symmetrically, making not an object, but what they will call a "pretty pattern". When their attention has been called to the possibility, regular exercises can be set, every one trying to make a "pattern" and then marching round as before to observe the different designs. These will be mostly of the star form, and Froebel shows how the outer blocks may be made to revolve or "dance" round the inner. Starting from the simplest form—the inner square with an outside cube at the middle of each side—the teacher directs in words, or with the help of the blackboard, the moving round of the outer cubes, one by one, to produce a new form. These are the "forms of beauty," and give the child some idea of harmony of proportion before he is old enough to draw. Reference to flowers, stars, etc., is made as the exercises proceed.

The Gift may also be taken to pieces and put together again so as to bring out simple mathematical truths. These combinations are the "forms of knowledge". The whole cube is separated into two halves vertically—two walls, they may be called at first; then horizontally—"two floors". Froebel suggests the singing of phrases describing the division, "One whole, two halves," etc. Again the halves may be placed alongside of each other, or one in front, one behind,

**Design
forms or
"Forms of
Beauty"**

**Mathe-
matical
combina-
tions or
"Forms of
Know-
ledge"**

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and these distinctions pointed out in rhyme. "Show me two halves," will secure the correct division from the child who is unable to *say* "two halves make a whole" without reference to his bricks. After the examination of halves in different positions, they are broken up into fourths (gate-posts one may call the standing ones to start with), and the child pointing to the four fourths names them, draws them together again, and gets one whole. Finally the eighths are obtained. Thus all the combinations of the number eight are investigated, and the naming may be helped by singing the descriptive rhymes suggested by Froebel.

Division, multiplication, subtraction, and addition are all being constantly employed though the names are not given. The operations are repeatedly performed, but the children are not made to learn the results by heart or questioned on "how many twos make eight". Finally, the arranging of the eight cubes into walls, floors, etc., of different shapes brings out the distinction between length, breadth, and depth or thickness, a distinction made more clear in the next Gift by difference in *size* in the three dimensions.

The cube in the Fourth Gift consists of eight building bricks formed by dividing once vertically and three times horizontally. Each brick is two inches long, one inch wide, and half an inch thick. This Gift is first given to the child of four or a little earlier, and is used frequently in alternation with the

Arith-
metical
operations
in concrete
form

The
Fourth
Gift: more
difficult
construc-
tion

Third Gift. By its means more ambitious objects may be built; the design forms are more varied, and being flatter suggest a surface pattern better; the mathematical forms, besides repeating with material of a different shape the numerical groupings of the Third Gift, show greater differences, as the bricks may be placed length-wise or end-wise beside one another.

Two new conceptions are brought out — balance and the “propagation of force”. To build a house or tower now the child must use greater care or the bricks fall; still he can build higher, and the two upright bricks with one across the top look like a door. The charming experiment of transmitting motion from one brick to another till the whole standing row has fallen, besides giving huge delight to the children, often sets them asking how it all happened, and leads the way, as the authors of the *Republic of Childhood* suggest, to a comment on the force of example!¹ Most of all, these blocks seem to become almost living things to the child. They will serve for soldiers or other characters in stories, and will be discriminated from one another by marks imperceptible to the adult eye.

Conceptions of:
1. Balance
2. Propagation of movement

The Fifth Gift is again a cube, three inches in each dimension, and trisected each way so as to form twenty-seven small cubes of one inch. Thus it is a development of the Third Gift. The triangular prism is introduced by the division of three cubes

¹ “Froebel’s Gifts,” p. 109.

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diagonally into halves, and of three diagonally into quarters. Hitherto vertical and horizontal lines have been chiefly attended to, oblique lines occurring only when one brick leans against another, or when in the design forms one is placed corner-wise to fill a space. Now the diagonal, representing the mean between horizontal and vertical, is permanently added, and the inclined plane freely used in the complex forms which the older section of the Kindergarten build according to instructions and repeat unaided.¹

The Fifth Gift : Differences in angles introduced and the inclined plane.

All sorts of mosaic patterns are laid, the square or the triangle being taken as the general outline.

The "forms of knowledge" include division into thirds and ninths (the numerical aspect being prominent), and a large number of geometrical figures in which the angles must be noted. The cube is divided into three "floors" or "tables," laid side by side, put together and separated horizontally into long "beams" or thirds of a different shape. Each of these is divided into three again, turned up to facilitate counting, and nine pillars or trees in rows of three appear.

Conceptions of number extended to thirds and ninths

By means of the half-cubes, starting from the rectangular prism, the children may construct rhomboidal, trapezoidal, pentagonal, hexagonal, and octagonal prisms. The forms

Harder geometrical forms

¹ Kindergartners often speak of "dictating" forms for construction. See *The Republic of Childhood*, "Froebel's Gifts," p. 81.

are worked out with much detail, and the descriptive rhymes again given. The angles are now named "right," "sharp," or "blunt," as the case may be, the child pointing to them as the phrase is sung.

The Sixth Gift—a three-inch cube divided at first into twenty-seven bricks—is a development of the Fourth, but more pieces are introduced by dividing six of the bricks in half breadthwise, and three lengthwise into pillars. Thus loftier buildings are constructed, balance becoming still more important. Larger surfaces are covered by the design forms, the extent calling more attention to the *flat* surface. Areas are further studied and multiples of two and three examined in different combinations. This is the last *building* Gift.¹

**The Sixth
Gift :**
Attention
called to
balance
and area

The Seventh Gift consists of tablets of cardboard or wood, square or triangular in form and brightly coloured. The squares are generally one inch in size. This Gift is an advance in abstraction, the plane or surface, suggested by the designs especially of the Fourth and Sixth Gifts, now being specially studied. The "forms of life" are now representative *pictures* of objects. The designs introduce colour as well as form. Further advance in geometrical conceptions is brought about

**The
Seventh
Gift :**
Study of
surfaces

¹ It should be noted that a new Gift does not entirely preclude the use of the last. In fact, in collective work two or more Gifts will be used in making a common erection. But the formation and possibilities of the new Gift must be fully examined before other pieces are introduced, as the child embarrassed with too much material cannot attend to it properly.

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through the different triangular forms. The Gift is chiefly used in connection with such occupations as colouring, paper-folding, and weaving.

Splints or sticks of various lengths about one-tenth of an inch thick constitute the Eighth Gift. This is a still further advance in abstraction from surfaces to lines. Some of the sticks may be jointed and this facilitates construction. Outlines of objects are made, or skeleton forms built up with the help of softened peas. Numerous sticks being used, design forms become elaborate, and suggest drawing. Every kind of angle may be made, and the increase or diminution illustrated. The number of sticks is an incentive to counting. Bundles of different sizes are readily put together and form an easy introduction to Arithmetic proper. Sometimes the reconstruction in skeleton of the solid forms is considered a Tenth Gift, and taken last of all.

The rings and semi-circles of silvered wire are accordingly treated as a subdivision of the Eighth Gift (curved *lines*), or as the Ninth Gift. Curved forms are now taken up, and the connection with sphere and cylinder made prominent. Geometrical rather than arithmetical conceptions are introduced here.

In the Tenth Gift (or Ninth, if the skeleton constructions are postponed) we reach the last spatial abstraction—the point. Peas, seeds of all kinds, and pebbles are used. Chalked outlines on desk or table are followed by placing the seeds in line. Only older children can

be expected to produce these outline forms, owing to the care needed to keep the points in place. "Pricking" outlines is the Occupation connected with this Gift. Counting rows and groups is a valuable arithmetical exercise, and the objects used lend themselves easily to being considered eggs, apples, etc., to be counted and sold.

It is very doubtful, however, if "point laying" or pricking exercises should be much employed. The minute work may strain the eyes. Older children, it may well be urged, would be better employed in genuine drawing.

Before proceeding to consider the Occupations it will be interesting and it may be useful to consider some of Froebel's directions for the use of the Gifts.

(1) The Gift in its own box is to be given to each child. If the different Gifts are exchanged they must be passed from one child to another in orderly fashion in the box, and at the end of the lesson replaced by each for himself. This encourages care and self-reliance.

(2) In every exercise the *whole* of the material is to be used. In the object forms, if one brick is left over it must represent something connected with what has been made—a sailor in the *boat*, the basket for the cherries for which the *ladder* was needed. This requires a good deal of thought, especially in the design forms.

(3) When practicable, the children who have learned the use of the Gifts should sometimes work at one table, building a structure in common. They will need super-

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vision at first, but nothing brings out better the spirit of mutual helpfulness, while ingenuity in fitting the different parts together finds abundant scope.

In connection with the building Gifts every student of children should read Froebel's observations on the mistake of giving them a play-thing too "complex and ornate and too finished". "The child can begin no new thing with it; cannot produce enough variety by means of it; his power of creative imagination, his power of giving outward form to his own idea are thus actually deadened."¹ Again, there is no incentive to seeing the "particular in the general and to taking the means to find it," as is illustrated by grouping the parts of the cube into different objects. A child soon tires of the highly-finished toy, while building or designing with the Gifts is continually enthralling.

The distinction between Gifts and Occupations is not an absolute one. It was never made by Froebel himself. Building or designing with the early gifts is an "Occupation" or "play," as Froebel called the exercises, and the materials for drawing, weaving, modelling, etc., are as much "Gifts" as the "bricks". If, however, the term *Occupation* is to be retained, it may be defined as an employment "where the child receives and finds materials which he can change and alter in form, which he may destroy, divide, diminish, in order to reconstruct, unite, and add to it again".²

¹ *Pedagogics of the Kindergarten*, p. 122.

² *Republic of Childhood*.

More important to be remembered than the distinction between the terms is the fact that the Gifts and Occupations are complementary, the conceptions acquired through the one being used in work with the other. "The *Gifts*," says Hailmann, "are intended to give the child from time to time new universal aspects of the external world suited to a child's development. The *Occupations*, on the other hand, furnish material for practice in certain phases of skill."¹

There is no set order for the introduction of the Occupations. Threading beads is a favourite for very little children, and (provided that the beads are fairly large) is a useful colour exercise, and keeps the sphere and cylinder in mind. But the solid forms made from clay and sand give more scope and more exercise. The youngest child can roll a clay ball, or make a sand pie. Paper-folding, paper-cutting, and weaving with strips of coloured paper, etc., are best for the older children.² The more elaborate paper-folding naturally follows the acquaintance with complex forms from the Fifth Gift onwards, though rectangular forms may be made earlier. A simple kind of stick-laying, or drawing in concrete lines, may be done by the younger children, the sand heap being available for rough tracery. From the earliest stage, too, colour (paint or crayon or chalk) is employed for filling up bold outlines.

Use of
clay and
sand

Work with
surfaces

Stick-
laying

Work in
colour

¹ Note in the translation of the *Education of Man*, p. 287.

² In the weaving it is very necessary that the strips should not be too narrow and the designs too elaborate, or the colours too glaring, to prevent straining the eyes.

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with colour and with clay allows more freedom of movement and scope for originality than the work with paper, sticks, etc., though the latter no doubt develops precision and neatness to a greater degree. The Gifts themselves, however, in the design forms, bring out much the same abilities as the stick-laying and the kind of drawing suggested by Froebel. The various object forms, designs, and geometrical figures are made on a desk or table divided into squares by incised lines. Drawing is approached by tracing the elements, vertical and horizontal lines, on paper having similar squares. Then oblique lines are taught, and all kinds of design forms are built up and coloured. This kind of drawing is a favourite exercise for the upper classes of the Infant School and Kindergarten, though it is open to some objections. Notwithstanding the skill shown in many of the designs, it gives far less development to the whole arm than the sweeping movements required in *free drawing* on the blackboard ; it is often painfully minute ; it employs only one hand ; children do not naturally at an early age see outlines with mathematical precision ; and constant employment on inanimate forms may prevent the attempt to represent familiar living objects. For it must be remembered that children from about the age of two delight in pretending to draw, though zig-zag lines and rounded scribbles constitute their main performances for a year or so. From four onward, however, they draw

Relative advantages of work in clay and colour as compared with paper-work, stick-laying, and drawing in squares

The child's drawing

"pictures"; and their original drawings are wonderfully interesting and instructive, as showing what points in an object have most struck them, whether they really have mental pictures corresponding to certain words, and so on. (Thus a little girl between three and four cried when directed to draw a *man*, but could, after a fashion, represent her father!) Original drawing in the Kindergarten is most helpful in making the children express themselves in connection with the stories and Nature study. The results have no intrinsic artistic value, but educationally they have the double value of stimulating the child to express his ideas, and, since he naturally discusses his "pictures," of giving the teacher insight into what interests him.

It is sometimes objected that the Kindergarten involves too much fine work and deals too much with artificial forms. Exercises with either Gifts or Occupations, however, last only half an hour (or less), and Games alternate with them. The ball suggests the first movement play. Froebel has described¹ how the children, standing in a circle, may throw the ball from hand to hand, or, using a green, a red, and a yellow ball, twine a sort of garland, while a little song is sung about the ball's wandering or dancing round the ring. Now the children are asked if they would like to go on a journey too. Each child may step out in turn, walk round the circle, greet his companions, saying or singing "Good-day," and, returning to the centre, name the children he

Games :
1. Movement or walking plays

Going on a journey

¹ *Pedagogics of the Kindergarten*, chaps. x. and xiv.

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has met on his journey. For the very little ones this may be a real journey of discovery, while older children may have their power of observation tested by asking them to close their eyes and then name the children in their order in the circle. Or, forming a column, perhaps in fours, the children march round the room, and, if possible, into the garden singing. The "Winding Brook" with its suitable song is one of these walking games, the children holding each others' hands, and the leader moving in and out. Or, facing each other against opposite walls, two columns of children march out to "visit" each other, form a double line, and traverse the room in a figure of eight. Holding hands again, the children may be led by the teacher into the spiral or "snail" form, tightly wound and unwound again. "The Mill" is played round a smooth tree or pole, half a dozen children putting their hands upon it and holding tight, other children taking hold of their left hands, others of *their* left, and so on till a number of spokes or rays is formed, and all move, first very slowly, then faster round the pole.

Other circular plays form stars, wheels, or flowers, the accompanying songs, as Froebel says, leading the children "to the observation of nature and of their own life".¹ Obviously *all* take their part in these Games; every one shares in the whole movement which becomes more complex with the children's

¹ *Pedagogics of the Kindergarten*, p. 265.

increasing skill, till graceful rhythmic motion accompanied by song grows a natural expression of feeling. Many of the old English ring games are admirable for play, though the words are unfortunately sometimes unsuitable.

The representation movement games bring us to those of the *Mutter- und Kose-Lieder*, the dramatic or imitative games. These are Froebel's selection and adaptation from the old songs and games of the German mothers. In them the child is naturally helped to understand the varied activities around him. Moving things are pointed out, the mother imitates the movement, helps the child to do the same, and teaches him a little song about what he is doing. She reminds him how the baker is baking the bread for him, how the flour had to be ground by the miller at the mill, how the reapers had to reap the corn, and so on, interesting him in work of all kinds, and showing how people are bound together, and must help one another. In the *Mutter- und Kose-Lieder* special stress is laid on the importance of arousing active sympathy with the wind, the brook, the birds and animals, and men in the useful occupations which the child can understand. The movements of imitation are always associated with the song in which the child himself is speaking, or the things which he imitates are speaking to him. Everything is full of life like himself. Often the games are played indoors; then the pictures illustrating what has been watched at another time are shown.

2. Imitative Plays:
The
Mutter- und Kose-Lieder

Its nature
and aim

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In the *Mutter- und Kose-Lieder* every game has its picture; generally there are children in the picture watching or actively engaged. The mother or teacher may show a new picture, and start a new play whenever the occasion is suitable. Take the "Mowing Game" for example. Suppose it is the haymaking season; the children have seen the haymaking or the carts of hay passing, and the teacher asks what they have noticed on the way to school; then the picture of the mower is shown, the grass, its growth in the summer sunshine, and its use when cut down are talked about; by-and-by the children repeat the words of the song with the teacher, and sing them as they imitate the mowing movements.

All sorts of country objects and occupations are represented, *e.g.*, the "Weather Cock" (calling attention to the mysterious wind), the "Bridge" and the "Farmyard Gate". The "Pigeon House" has become a familiar friend; the "Nest and Chickens" and the "Fish in the Brook" appeal to the children's sympathy with *little* creatures. There are many "Finger Plays" for the very little ones. No special order is followed, and the teacher makes her own selection. Useful as the book is it cannot be followed blindly. The subjects are not all suitable for English children: the "Charcoal Burners," for instance, is meaningless to them; the "Wolf" and the "Wild Pig" quite unsuitable. The "Mowers" may have little meaning for town children. The wisdom of impersonating plants, animals, etc., by small children has sometimes been doubted. But no

Its use
to the
teacher

real confusion of thought results. Children of their own accord are always copying the movements that interest them. The dramatic point of view soon changes. The natural tendency to read life like his own into moving things is better guided by such games with their talks, which bring out sympathetic interest in the function of natural objects, than let alone, or approached by incomprehensible scientific "explanations".

The text of the *Mutter- und Kose-Lieder* has often been translated, but the pictures cannot be, and their foreign character often renders them quite unsuitable for our Kindergartens. Moreover, they lack the colouring which is so essential. Consequently the beautifully illustrated *English* nursery rhymes are often better for English use. The innumerable modern songs and poems for children also offer a wide field for selection; but Froebel's book will always be invaluable to those who breathe its spirit instead of copying its details. "Whoever has grasped the pivot idea of this book understands what I am aiming at,"¹ he was fond of saying.

In the modern Infant School or Kindergarten Nature study and story-telling have a **Nature Study as the Centre of Interest** large place. On the whole the former is more prominent. In many schools the whole work centres around the Nature lessons. This, of course, may sometimes prevent the thorough employment of the Gifts, as it leads more to free

¹ *Child and Child Nature*, by the Baroness von Marenholtz-Bülów, p. 107.

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drawing, colouring, and modelling than to the formal Occupations. Nature study is certainly an important part of education, and the early Kindergartens, as we have seen, had their gardens and their pets. The songs and Games imply constant talks about Nature, and Froebel assumes a natural environment. Thus growing plants in the schoolroom, and watching their development, following the changes of the seasons as regards weather, trees, flowers, and birds, and observing the snails, tadpoles, and goldfish of the aquarium are all in entire accordance with the aim of the Kindergarten. The keeping of animal pets has, of course, its limitations in a town school; mice may be managed, however. Cats and dogs as visitors offer no difficulties. A kitten is naturally the great favourite of the smallest children, and one may see the most lively child sitting absolutely still for once because she has been allowed to nurse the kitten and it has gone to sleep.

Nature study in a large town needs much thought to make it educative in the Froebelian sense, that is, to make it help children to understand the life around them, by putting forth their own powers. They may, in spite of parks, and of trees in the streets, have little contact with the world of Nature. To them the schoolroom with its plants and pictures is "an isle of bliss midmost the beating of the steely sea". Its plants and pictures will furnish the readiest of material close at hand for observation. Expeditions, unless a park is very near, must be reserved for later years,

**Nature
Study in
a town
Infant
School**

and, though branches and flowers brought by the teacher may be examined and talked about, they are not seen in their proper surroundings, and may tend to the introduction of too formal "lessons". But the human activities of the town are after all interesting and important to town children. Shops, and water carts, and milk carts, the policeman, and the 'bus driver are constant attractions. These cannot be neglected in favour of more remote forms of life. The "baker" and the "carpenter" and the "toy-shop man" have as honourable a position in the *Mutter- und Kose-Lieder* as the "mower" and the "charcoal burner".

In grouping her work round a special centre of interest, then, the teacher has to consider the children's characteristic experience, and in the town will naturally dwell more on the works of man, though she may hold with Froebel and Wordsworth that childhood develops ideally in contact with "high objects, with enduring things, with life and Nature".¹

Instead of the Nature lesson the story is sometimes made the central point, though no important **Fairy** distinction necessarily results, as the story **Tales** is generally chosen with a view to the season, and the Nature lesson often takes the form of a story. Froebel, in the *Education of Man*, specially advocates the "narration of stories and legends, fables, and fairy tales" as part of the boy's education, and the pictures in the *Mutter- und Kose-Lieder* lead to stories as well as to games and songs. The teacher either invents

¹ *Prelude*, bk. i., ll. 409-10.

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her stories, in which case she is sure to keep the children's own life well in view, or draws upon the old folk-tales, or the great store of modern fairy tales, of which Andersen's are perhaps the most valuable. From a literary point of view, one does well to follow the time-honoured folk-tales. Personal invention gives variety, and is sometimes needed in adapting the old stories. Even the favourite "Red Riding Hood" has its difficulties. If the grandmother is sacrificed, we may be accused of encouraging a taste for horrors; if she is concealed in the cupboard, according to a modernised version, we disappoint the dramatic instincts of the small boy who, when asked where the real grandmother was, replied with conviction, "in the wolf". Froebel urges the preservation of the "child's young spirit's purity";¹ and representing the wolf as an enemy to be hated may stimulate undesirable feelings. Perhaps the difficulty is overcome by telling at another time the story of the "good wolf" who preserved Mowgli. The child is quite ready to believe in "good" wolves and dragons and giants, as well as dangerous ones. It is best not to tell too many stories but to let the children really live in those selected. Thus they are led to understand themselves in relation to man and Nature. Their relations to God, as Froebel shows, can be apprehended only through the home life, and through imitation of parents and teachers, in showing gratitude and reverence for all that is beautiful and serviceable in Nature. At school in the earliest years the time for definite

¹ Motto for the "Wolf" and "Wild Pig",

Biblical instruction has not come. The children may be taught simple hymns of thanksgiving for the sunshine and flowers and the love around them. The Christmas festival with its thought of the Christ child was one of the means Froebel employed at Keilhau to raise the children's imagination ; and he would have hung up in the Kindergarten pictures of the child Jesus on His mother's lap, and in the Temple. The children may, without reference to theological conceptions beyond their years, be told in simple fashion about the love and obedience of the Divine Child, and have kindled in them some desire to follow the Great Exemplar.

EXTENSION OF KINDERGARTEN METHODS WITH OLDER CHILDREN.

WHEN a child from the Infant School enters the lowest class of the Junior School, he often finds the conditions of life greatly altered. He must now learn, as a little girl about to leave the Kindergarten put it, "to sit up straight, to read out of a book, and to do real sums with letters at the top" ("*t* for *tens*, *u* for *unicorns*"). He must learn other things also, though, in Standards I. and II., "sums and spellings" do tend to become the serious business of the day. Some teachers emphasise them to make up for what they consider the lost time of the Kindergarten. Other teachers, however, try to make the change as easy as possible by continuing the Infant School methods in teaching Reading and Arithmetic—combining the Look-and-Say method in Reading with exercises in enunciation and word-building on the Phonic System, and teaching from concrete objects in Arithmetic. Still, when the novelty has worn off there is no new enthusiasm for the Reading and Arithmetic lessons, and the subjects are found a strain, especially as teachers feel that now distinct progress must be looked for.

It is quite true that about the age of seven (when

the brain has almost reached its greatest size) a child is prepared to enter upon fresh work. Memory and imagination appear much more distinctly than at the age of four or five. The child of seven takes more interest in persons, cares more for stories, and tells them more coherently. His senses being well developed, and his movements well under control, he becomes more enterprising and seeks to understand the world beyond school, street, or garden.

**Change of
work at
seven
years of
age**

According to Froebel, the school age proper, or age of instruction, begins now. Children of six or seven up to eight or nine years are provided for in his system by the Transition Classes, where the concrete methods of the Kindergarten lead on to wider knowledge and more abstract thinking, and where the formal studies are definitely begun. The idea of postponing Arithmetic, Reading, and Writing, till the age of six at the earliest, seemed strange to conservative teachers, but it is the inevitable corollary of Froebel's view of the necessity for the child's active co-operation in education.

**Transition
Classes**

Writing and Reading are simply means of communicating our own thoughts to others and receiving information from them. They will be best introduced when the child has something to communicate and desires to know more than his immediate surroundings can teach him. Arithmetic in the form of counting and comparing as to size, etc., has been in constant employment in the Kindergarten. Figures have not

**Place of
Reading,
Writing,
and Arith-
metic**

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been used any more than letters and printed words. Figures and letters alike are symbols *representing* the group or the spoken word, and calling up an image of it in its absence. The child in the Kindergarten is occupied with the *present perception*, and the symbol on the blackboard only distracts his attention from that perception. That some children, between four and five, almost learn to read of themselves, is no proof that this is the best employment for them, or that reading should be taught at this age to all children. As a matter of fact, it is usually the rather quiet and sedentary, perhaps delicate, children who "pore over a book" when at home; the readiness with which they grasp and remember forms of words indicates the visual "sensory" type. The impulse is of course the desire for stories, and frequently denotes lack of companionship and of outlet for strong feelings. An active, healthy child is usually too much occupied with all sorts of observation and movement to develop any "inner need" for books, though fond of *hearing* stories. Such a child is not less intelligent than the readers, but when the members of his family, with spasmodic conscientiousness, strive to teach him the primer, he is indifferent to the "ox" and the "box," as *real* stories are to be had on much simpler terms. Once the *desire* to read appears the process is accomplished quickly; it seems "to come all at once".

Froebel's delightful study of "How Lina learned to Write and to Read" shows the rapidity and ease with which the Kindergarten-trained child is expected

to acquire the arts.¹ Lina is about six years old, and has just left the Kindergarten with all its accomplishments. She can build, and lay forms with sticks and tablets, catch the ball dexterously, and sing songs to her plays.

**"How
Lina
learned to
Write and
to Read"**

Her father being away she wants to write him a letter. Her mother begins to teach her how it can be done. The letter will be signed with her name, so a start is made with "Lina". Through the Kindergarten exercises in clear articulation and singing the child understands how to listen for the different sounds in a word. She has been taught to distinguish between the "open" sounds and "close" sounds (vowels and consonants). Thus she readily notes the *i* and the *ā* (*ee* and *ah*). The mother lays these letters in Roman capitals with small sticks upon the table, Lina repeating the sounds and then laying the letters for herself. The *l* and *n* sounds are then attended to, and the letters laid in place upon the table. The child sees her own name delightedly, and makes it herself, repeating the exploit later for admiring friends. The word is built up from its elements, according to what we now call the Phonic Method. But the elements are not all introduced at the beginning and learned off as we used to learn the letters. The *word* (in this case a specially interesting one) is the starting point. From this and other words (*vater*, *mutter*, etc.) which the child *wants* to write, she picks out the sounds and forms her own alphabet. Of course she is guided by the mother, and does not

¹ See the last paper in the *Pedagogics of the Kindergarten*.

invent her symbols. But the lines on which written language was evolved are followed. German spelling being more regular than ours, her progress in acquiring new words is rapid. After using her box of sticks for a time, she learns to trace the letters on a slate with squares, and afterwards copies them on to squared paper in coloured pencil. She now sends a real letter of a few words to her father. The printed letter in reply uses signs she already knows, and she puzzles the words out for herself. After printing and receiving more letters she is given a book, and encounters in the German type a greater difficulty than English children meet in their first books. However, with the aid of a slate and pencil, forms are compared, Lina showing acute observation of small details, and the relation between German and Roman letters understood. At last she can make out the words in her book, and being old enough to want to read the story she gets along fast. In a few weeks, then, she has learned to read. It will be noticed that the *writing*, or printing rather, takes the lead. After putting together words *herself*, she is able to recognise (or analyse and put together again) whole words in her father's letter which she endeavours to read. The lack of painful effort in the whole process results from the child's intelligent desire to write a letter and to read a book. Moreover, she is able, since she can speak quite clearly, to attend to the separate sounds in the words. And her quick fingers, used to producing other forms, make the letter forms easily.

Our hopelessly illogical spelling makes the teaching

of Reading to English children more complex. If, however, the same general lines are followed, **A Reading lesson** a lesson which on the old-fashioned alphabetic plan involved tedious drudgery, becomes fascinating for both teacher and pupils. One may watch a Reading lesson given to children of seven and eight who have already had regular language lessons in clear self-expression. They have analysed out most of the sounds in words (from examining their own names, etc.). Now they are making up a short story. After a preliminary drill from the blackboard in the fundamental vowel and consonant sounds, they gradually put together the words required, under the teacher's guidance. She is no longer trying to impress symbols on a passive, perhaps unwilling, class ; the children are helping actively in the quest for the right form which is to be used in *their* story. As the words are built up on the blackboard the children print or write them upon their paper or small boards.

Finally, the story is read with as much variety as possible, to give practice.

Writing (in a bold round hand) may take the place of printing at a fairly early stage. The lowest Transition Class will probably master the elements of Writing as an outcome of drawing. To pass from printing, or laying with sticks the straight Roman capitals, to "drawing" the rounded letters (the small ones first) is not a difficult process.

Subsidiary lessons in word-building are required to impress upon the children groups of rhym- **Word-**
ing words. The use of coloured chalks **building**

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and of the diacritical marks and varying outlines of the Phonic Method help to simplify the anomalies of our spelling. A good deal of work from the black-board at the outset is needed. Some teachers employ also reading sheets with matter prepared by themselves suited to the stage of progress and correlated with other lessons.

The gradual advance from counting actual objects towards abstract Arithmetic begins to appear in the Transition Classes. Just as the sounds are associated with their symbols, the letters, small groups of objects are now connected with their symbols, the figures. The sign helps the child to think of the whole group as distinct from others, in whatever order the parts are arranged. Number lessons are now general in the Infant School, but if the *figures* were not taught until the "First Class" was reached they could then be grasped more intelligently. It is an interesting exercise to build up the forms of the figures on squared paper. When the figures are known, the number lessons should be accompanied by setting down on boards or paper the results obtained at each step. The Gifts form good material for these exercises. With the Third, for instance, the whole cube is analysed into units which can be combined in different ways to make the original amount. Eight, four, and six are easily analysed into their equal parts in this way—the equal divisions coming naturally as the first grouping; the other combinations which arise from changing one or

more blocks over to the other side are obvious developments. For the number nine if the Third Gift is used another block can be added. Sticks and other objects, too, are always available. Several combinations (2×2 ; 2×4 or 4×2 ; 2×3 or 3×2 ; and 3×3) will be most frequently repeated and noted and form the beginning of the Multiplication Tables. The analysis of composite wholes into groups is the best method to follow. Children who see things as vaguely distinguished "lots" become exact about the number by dividing them up, by using, if not by counting, them. A small child finds out the possibilities of his box of bricks in this way. Building up in ones is less frequent and leads nowhere in particular.

The number ten introduces a new difficulty—our system of numeration. Before the children in the Transition Classes can write it down, they must understand the system of counting things by tens. This may be led up to by having the sticks, peas, etc., used in the Kindergarten classes counted in tens. The sticks may be easily tied into bundles; the numbers twenty, thirty, forty, etc., may be discussed orally and the meaning brought out—two tens, three tens, etc. The children will often have odd "ones" over.

They are now ready for lessons in numeration and notation, and simple addition and subtraction.

Small cubes represent the single ones or units; boxes containing ten of these are the tens; and, when hundreds are reached, ten of these small boxes fitted

Analysis of
numbers
comes
first

Numeration

Counting
objects in
tens

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into a large box make up the hundred. Marking the separate columns on floor or table, the teacher places several single cubes in the units column, and boxes of ten in the next. The blackboard is similarly ruled into columns, and the corresponding figures written there. Numerous exercises are

**Exercises
in Numeration
and Notation
leading to
Addition
and Subtraction**

given in reading off the numbers in the columns on the floor or table (numeration), and writing the figures on the board (notation); or reading out the latter, and placing the required numbers of cubes and boxes in their columns. The numbers will probably be read out in the two forms "four tens and three," and then "forty-three". After several chil-

Addition dren have placed different numbers in the columns, both in concrete form and in figures on the board, the rows suggest adding up to find the total amount. Supposing the single cubes to exceed ten, another box or boxes will be filled and placed in the tens column, the remaining units being called out, and set down on the board. The tens are then added and the result set down. A small class will, of course, stand round and perform all the operations themselves, taking it in turns to arrange the apparatus, and work on the board. In a subtraction

Subtraction sum there will be only one row of concrete tens and units, the amount to be taken away being *remembered* by the children (or noted in figures below to remind them). When thirty-nine is taken from fifty-three, it is clear that one of the tens boxes must be opened. If the ten cubes are placed

neatly above the three, the children are likely to take nine from ten, leaving an odd one with the three. The remainder is as before written on the blackboard. There is no difficulty with the tens, as obviously only four tens are left to take from. This concrete working out of the method of decomposition in subtraction must be performed again and again before the children can think the whole process out, guided by the figures alone. Only when the association between actual substitutions with concrete objects and the corresponding figures on the blackboard has become thoroughly established is a subtraction sum for children of seven or eight anything but a mysterious juggling with figures.

The same operations are carried on in compound addition and subtraction with coins as materials. Matches, again, or bags of beans are useful for the concrete illustration of tables. It is best for each child to make his own tables on the desk in front of him; in this way the fact that three fours may be re-arranged as four threes, still making twelve, is most firmly fixed, as every one has done it for himself instead of merely watching it done. There is also the advantage of still having the groups before the eye when the table (or part of a table) is completed, so that recapitulation does not simply depend on memory. Even when children of six or seven have watched the teacher build up the tables on the ball-frame the disappearance of the earlier groups, as new ones are formed, is apt to be confusing. Strokes and dots on the distant blackboard do not hold the

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attention so well as the child's own groups. It must be noticed that if the children learn to say their tables without constant reference to the actual groups the connection is not made distinct. They will remember the words as a sort of chant, and they will understand the demonstrations at the time, but the former will not suggest the latter. We shall find them when questioned murmuring over the table from the beginning, and knowing that "four sixes are twenty-four" without being able to say that six can be taken four times out of twenty-four.

The conceptions of number gained from these lessons should be regularly applied to practical exercises in measurement, etc. A good deal of work has already been done with the Gifts in observation and discussion of forms and dimensions. Small calculations can now be made with respect to length, breadth, and height of familiar objects, or weight in pounds, half-pounds, quarters, and ounces.

Regular use of the ruler for measurement will also be required in simple geometrical lessons. From measuring and representing on paper books, boxes, etc., full-size, half-size, quarter-size, the children are led on to plan-drawing, and to the idea of drawing to scale in representing objects too large for the blackboard or paper. The plan of the classroom should of course be approached gradually, desks and table being at first difficult enough to draw to scale. In a higher stage the Transition Classes will measure the playground and draw a plan of it. A

**Exercises
in meas-
urement**

**Plan
drawing**

good introduction is made by asking the children to draw the *shape* of the playground from memory, or the shape of the whole ground floor of the school.

Lessons of this kind develop in two different directions. In one direction attention is called to differences in angles and lines and in another is led to simple notions of Geography. The relation of school and playground to the neighbouring streets is observed. Though more extensive plan drawing is not as yet feasible, children at this stage can represent roughly the general directions of the streets, and name them by fixed landmarks.

Geometrical conceptions

Geography of district

The points of the compass are taught in connection with these lessons. No doubt the children already know the *names* north, south, west, and east from speaking of the winds. The teacher connects the names with familiar landmarks, and the streets can be spoken of as running east and west, etc.

Points of the Compass

The importance of the sun's position is brought out by discussing with the class how they would know directions in a strange place. They may reflect for themselves that the sun always rises or sets in a particular direction, or the teacher directs them to notice what is always to be seen in front of them in the evening, however far along a certain road they may go. The apparent movement of the sun from east to west having been observed, the position at noon should be specially noted. The children should watch how the shadows fall, and mark their own cardinal points

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on the playground from the shadow cast by an upright stick ; at first they will have to notice this day after day.

The enquiry will probably be raised : Does the sun *really* move round ? Then though one cannot as yet *prove* that it is the earth which rotates, we can explain this and make quite clear, by darkening the room and using a globe and lamp, how a point marked on the surface of the globe comes into the light and passes on till the "sun" disappears again. The children may next be directed to look for the Plough and the Pole star at night.

While the directions are being discussed, attention will naturally be frequently called to the winds and their character. Children living on the western side of England will soon notice the rainy winds, and even if they do not live within reach of the sea, will readily understand why these winds bring so much rain. Thus they are led to think of places a great way off, and long before the study of the Geography of foreign lands is systematically taken up they will have ideas of the countries across the seas where the ships come from, the cold north, the warm south, and so on. Everything beyond the immediate "circle of experience" need not be excluded, remarks Froebel,¹ though new and strange things should be led up to from the actual surroundings. Besides emphasising directions, attention to the winds, clouds, rain, presence or absence of sunshine, etc., lays the foundations of the study of climate.

¹ *Education of Man*, p. 262.

If a calendar is made for the schoolroom, recording the children's weather observations, noting the direction of the wind, etc., there will at the end of a month be a good deal of material for discussion, and keen observation is aroused. The developments of this kind of work in learning the names of the months, noting their general character as to weather, with reference to popular proverbs and descriptive poems, can only be mentioned.

We have regarded the school as situated amongst streets, so that the natural approach to Geography has been rather through studying directions than "physical features". If the school is in the country or near the sea, the latter are readily learned from actual observation in short expeditions. Even in town, however, children of seven can visit a park, see an island in a lake (perhaps a stream), and get an idea of hills and valleys; or they may have the river and the direction of its course pointed out to them as they pass over a bridge. Modelling physical features in clay or sand and pointing them out in picture maps, afterwards giving definitions of them, should follow some sort of actual approach to the things represented. Children naturally find it hard to grasp the extensive surfaces referred to in Geography. They may make an excellent modelled map to illustrate physical features without at all understanding its small proportions. Thus a child of eight suggested that a man might "shout across," when telling a story about her map repre-

**Beginnings
of Physical
Geography**

**Study of
physical
features**

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senting a part of the Mediterranean. The ideas gained in plan-drawing indoors enable the children to understand how to get a fairly general view of the park visited by looking down from the highest point. A rough outline may be traced on the ground (or on paper for use on return to school).

All the definitions of the divisions of earth and sea which are considered necessary may easily be combined in a large model (constructed, if possible, by the class). They are more readily understood in such a combination, and may be introduced, or recapitulated gradually by means of a story. Robinson Crusoe has been most generally drawn upon for the purpose. Modelling and drawing or painting in colour are Occupations which best accompany this work.

Among the details of school instruction in the last chapter of the *Education of Man*, Froebel works out skilfully the kind of conversational lessons on the children's surroundings which lead to Geography as an independent study. Clearly before the Geography of the country or county can have any distinct meaning, some ideas of the immediate district, and what lies further on in the directions explored, must be possessed. The teacher will often find even a reference to tram-car routes helpful.

Geography has, however, another point of approach in Nature study. The plants grown and observed in the schoolroom begin to be sought in their natural environment out of doors. Flowers of the hedgerows become distinguished from those growing by the

Geo-
graphy as
approached
through
Nature
Study

water or on the hills and moors. Products of the fields are noted and differences in vegetation accounted for by considering soil, altitude, etc. Changes of season invite expeditions. The desire to see animals and birds in their own haunts draws a boy further afield. If short excursions do not permit of any real survey of the district, a school journey is the more desirable.¹ Froebel emphasises the importance of the boy's seeing his valley in its whole extent, following the brook or rivulet from its source to its mouth and understanding the region in its unity.² From the point of view of Geography it is necessary that any excursion should be preceded and followed by a discussion and sketch of the route, and that prominent landmarks should be noted on the way.

Nature study in the Transition Classes will lead towards simple analysis and classification. **Nature Study**
The parts and functions of the plant will be studied without using technical terms. The domestic animals and the common wild animals and birds will be considered as to habits and structure. Museum lessons, or a visit to the zoological garden in a town, will be of great use. In the case of trees, flowers, birds, and animals a rough attempt will be made to classify as regards locality or special home.

A great deal of sketching and modelling will be required along with these lessons. Even in a museum lesson much closer and more serious observation is

¹ "Short journeys and long walks" are advised by Froebel as "educational means".—*Education of Man*, p. 309.

² *Education of Man*, p. 311.

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given by a class provided with rough note-books.

**Drawing
and
modelling
as illustration**

Young children's efforts are crude, but not to be despised. In the case of leaves and flowers the drawing, painting, and modelling of the Transition Classes may reach a fairly high standard. Regular practice is also required in drawing large curves and other simple outline forms on the blackboard to give training in accuracy, steadiness, and freedom. But the representation of a leaf or flower from the one before him stimulates the child to special effort. Some of the results will naturally be used to ornament the schoolroom. It is important for the children to recognise their own ability to make beautiful things out of simple materials.

Many teachers encourage the children to keep a record of specially interesting observations—the dates of the return of the swallow, of the rook's beginning to build, of the appearance of certain flowers, etc. Calendars of this kind are a great encouragement to individual enterprise, and lend themselves readily to illustration.

The study of surroundings, Froebel points out,¹ is strikingly characterised by the way in which new subjects branch out of it for special treatment. Nature study is closely connected with the desire to express

**Connection
with songs
and poems**

ideas and feelings in songs and poems. Children are delighted to learn poetry about the trees and birds they are studying. When the Transition Classes have been reached, we should endeavour to choose *good* poetry both for

¹ *Education of Man*, p. 254.

repetition and singing. English lyric poetry is rich in possibilities of choice.

The songs and stories of the Kindergarten in close touch with the child's life and its events lead up to stories with a wider range in the Transition stage. These help to give a clearer comprehension of the life of man. "Only the study of the life of others," says Froebel, "can furnish points of comparison with the life the boy himself has experienced."¹ Legends of the race (especially valuable if these are connected with the district) form an introduction to the study of History. Since History and Geography will later be developed together, the former cannot be definitely started till the Geography of the country is begun. The simpler life of man in the morning of time is more in touch with the children's life than the present. It can be closely associated with the Nature study and Geography of this stage. (Greek stories as "Nature myths" are often introduced here.) The ethical aspects of the stories, however, must not be forgotten, especially as Froebel points out in showing the consequences of an incident.² The stories lend themselves to dramatic representation and to all sorts of illustration.

It is at this stage that the Herbartians introduce Scripture lessons, the story of Joseph bringing before the children the pastoral life and incidents of the family which they will appreciate. Froebel simply advises here that children

Introduction
to
History

Stories
from the
Bible

¹ *Education of Man*, p. 305.

² *Id.*, p. 308.

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should commit to memory religious sayings, and that teachers should endeavour to bring into greater clearness the sense of unity with God. In illustration he mentions the teaching of evening prayer and thanksgiving for happiness.¹

Both in connection with Nature lessons and **Language lessons** stories, language lessons as well as reading, will be necessary. The language lessons in the Transition Classes will be "oral composition" rather than formal Grammar, though the way for the latter will be prepared, as Froebel shows, by exercises in naming things perceived by the different senses, their various activities, qualities, and relations.²

The Occupations of the Transition stage have been **Manual work** seen to consist of representation, especially by drawing, colouring, and modelling, of the subject-matter of other lessons. Modelling in cardboard is frequently introduced here, and woodwork may be commenced. The use of tools will enable boys a little later to construct things for the use of home or school. Froebel says much of the value of such physical productive activity which like "a refreshing work-bath" reinvigorates the mind for intellectual work.³ Manual work, with games and regular physical exercises, also develops the powers of the body.

¹ *Education of Man*, pp. 246-48.

² *Id.*, section on language exercises (last chapter).

³ *Id.*, p. 236.

As a summary, Froebel's list of the various directions of educational activity should be noted.

**Froebel's
survey of
the means
of educa-
tion**

(1) The arousing, strengthening and cultivating of the religious sense, and, for this purpose, the learning of religious utterances.

(2) Consideration, knowledge, and cultivation of the body as the servant of the mind.

(3) Observation and study of Nature and the external world, proceeding from the nearest surroundings to the more remote.

(4) Learning of short poems representing Nature in relation to the incidents of home life, especially for the purposes of song.

(5) Exercises in language, starting with the study of Nature and passing over to the inner world, but always with strict reference to language as the audible medium of representation.

(6) Exercises in outward corporeal representation (in building, working in paper, cardboard, wood, and clay).

(7) Exercises in representation with lines in a plane in constant visible relation to the vertical and horizontal direction. (This is the drawing in squares previously referred to.)

(8) Study of colours and representation of these in prescribed outlines (the filling in of outlined forms in colour or painting in squares).

(9) Play or representation and exercises of all sorts.

(10) Narration of stories and legends, fables, and

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fairy-tales with reference to the incidents of the day, of the seasons, of life, etc.

(Froebel adds a long comment on the value of definite domestic duties and manual work.)¹

Thus, when we look beyond the Kindergarten, we see how the education begun there is not a mere pleasant passing of the time among playthings to be laid aside for serious "intellectual" work in the upper school. Following the same lines, with widening outlook and deeper insight, children are led to enter into the main interests of life, realising their own part in relation to all these by putting forth their powers in active investigation, intercourse, and reproduction. "The reward of labour is life," says William Morris, and the creative industry of Froebel's system of education brings the joy of living into clearest consciousness.

¹ *Education of Man*, pp. 234-37.

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by an anonymous writer is now out of print.

ROBERT OWEN.

The only available biography is the

Life of Robert Owen, by Lloyd Jones, edited by W. C. Jones.

The more valuable

Robert Owen and his Philosophy, by W. L. Sargant,
is out of print. In both works Owen's educational activities have a
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Life of Robert Owen, written by himself,
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STOW.

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*Memoir of the Life of David Stow, Founder of the Training
System of Education*, by the Rev. William Fraser,

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The Training System, Religious, Intellectual and Moral,
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Of biographies of Froebel there is an embarrassing choice. Any of the following may be recommended to the student :—

Life of Friedrich Froebel, by Henry W. Blake, prefixed to the Quarter Century Edition of Wiebe's *Paradise of Childhood*, ed. Milton Bradley.

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